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ABSTRACT

This package contains the instructor's manual, instructor's resource package, and student workbook for a 1-year introductory course in equine management and production. The course emphasizes the skills needed to manage small one- or two-horse facilities and to enter postsecondary equine education programs. The instructor's manual presents basic information about using the publication, infusing basic skills instruction into the curriculum, and measuring student performance gains; it lists required criteria for competency-based educational programs. Also included are an instructor's guide, test and assignment answers, and an instructional unit for each of the course's 20 topics. The instructor's resource package includes one set of the following components per unit: learning activity package sheet, transparency masters, written test, handouts, and other required media. The student workbook contains objective, information, assignment, and job sheets for each of the following units: equine industry; safety; handling, grooming, and general care; handling young, unbroken horses; physical facilities and stable management; horse health and disease prevention; basic first aid; parasites; foot care; common leg and foot problems; practical horse nutrition, equine genetics; stallions; mares; parturition; care of mare and foal; identification, selection, and marketing horses; judging; transporting horses; and selection/care of track and equipment. (MN)

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CIMC
Teacher Edition

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Oklahoma Department of
Vocational and Technical Education
1500 West Seventh Avenue
Stillwater, OK 74074-4364

AG10107

Equine Management and Production

Instructor's Manual

Upfront

Instructor's Guide

Answers

Test Code Sheets

Instructional Supplement

Developed by the
Curriculum and Instructional Materials Center
for the Division of Agricultural Education
Oklahoma Department of Vocational and Technical Education

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One set per unit of the following components:

- Instructor's Guide
- Answers
- Test Code Sheets

Instructional Supplement (one set for all units)

Instructor's Resource Package

One set per unit of the following components:

- LAP Sheet
- Transparency Masters
- Written Test
- Handouts
- Other required media

Student Workbook

One set per unit of Objective Sheets, Information Sheets, Assignment Sheets, and Job Sheets for the following units:

SECTION A

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Fundamentals of Foot Care B4-1

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Common Leg and Foot Problems, Trimming and Shoeing B5-1

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Unit 1
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Unit 1
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Unit 1
Selection and Care of Tack and Equipment H1-1

FOREWORD

The equine industry is a multimillion-dollar business that impacts Oklahoma in a variety of ways. Many Oklahomans are involved in equine-related activities such as feed, tack and equipment production and sales, racing, publication production, veterinary care, advertising, and clothing sales for equine-related activities. *Equine Management and Production* is designed to provide a basic core of information necessary for success in all of these occupations.

Equine Management and Production will prepare students for managing small one- or two-horse facilities, as well as provide them with a sound foundation for entry into post-secondary equine education programs. When used as a total delivery system, the *Equine Management and Production* instructional package will create a highly effective first year program.

Eddie Smith
State Supervisor
Agriculture Education

PREFACE

The *Equine Management and Production* curriculum is an introductory one-year curriculum for an audience that is primarily 16 to 19 years of age.

The content of this guide was determined by an advisory committee that reviewed the original 1980 edition for revision purposes. The committee also recommended the organization of the information and the resources to be used for developing the material that was added.

The *Equine Management and Production* instructional package is designed to take advantage of multiple delivery media. It includes print-based materials, videos, and a textbook with computer software.

It has been our goal to produce a total instructional package that instructors can use to deliver a highly effective first year program with very little supplementation.

Sherry Wietelman, M.S.
Instructional Development Specialist

ACKNOWLEDGMENTS

The Curriculum and Instructional Materials Center (CIMC) extends its appreciation to the individuals who played key roles in the development of this publication. Such a comprehensive effort requires contributions from many people. We sincerely appreciate the support necessary to complete this project.

Special thanks are extended to the following persons who committed their time and expertise as members of the curriculum advisory committee. We also thank the administrators, supervisors, and others who supported their participation.

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Helena Vo-Tech Skills Center
Helena, OK

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- Beth Ann Fulgenzi for revising and rewriting all 20 units, coordinating the art work and photographs and formatting and producing the units in the new CIMC format.
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The close cooperation and dedication of other professionals at the Oklahoma Department of Vocational and Technical Education was instrumental in producing this publication. The cover was designed by David Thompson in the Art Department. This publication could not have been printed without the expertise and commitment of the Print Shop staff, under the supervision of Danny Darrow. Delivering the final product was accomplished through the excellence of the staff at the CIMC Warehouse, under the direction of Darrell Stiles.

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A number of people at the CIMC helped to make this product possible. Brenna Tillman, Publications Supervisor, and Charlotte Tarkington, Format Specialist, are responsible for the outstanding quality of this publication's layout and design. Terri Tomson efficiently handled the development contracts and organized the committee meetings and related correspondence through which this book was developed. Billie Frazier, Copy Specialist, supervised the development of basic skills-related components and answered all our copyright questions. Kathleen Kincaid helped locate and acquire media for the media package.

This project received generous support from John Friedemann, CIMC Team Leader, and Dr. Lynna Ausburn, CIMC Development Coordinator, Dr. Chuck Hopkins, Assistant State Supervisor, and Dr. Roy Peters, Jr., State Director.

Sherry Wietelman, M.S.
Instructional Development Specialist

USE OF THIS PUBLICATION

INSTRUCTIONAL UNIT

Each unit of instruction is based on the performance needed for successful employment in an occupational area. *Equine Management and Production* contains twenty units of instruction. A complete unit may contain most or all of the following components: Objective Sheet, Instructor's Guide, Information Sheet, Instructional Supplement, Assignment Sheet, Job Sheet (and Skill Test Record), Written Test, Answers (to Assignment Sheets and Written Test), Transparency Masters, Learning Activity Package (LAP) Sheet, Handouts, and other required media. These components are organized within three packages, as follows:

Instructor's Manual

- Upfront pages (title page, copyright page, table of contents, foreword, preface, acknowledgments, measuring student performance gains, required criteria for a competency-based education program, and corrections and suggestions)
- Curriculum and Duty/Task Crosswalk (as appropriate)
- Basic Skills Matrix
- One set per unit of:
    - Instructor's Guide
    - Answers
    - Test Code Sheets
- Instructional Supplement (one set for all of the basic skills enablers appearing in the book)

Instructor's Resource Package

- One set per unit of:
    - LAP Sheet
    - Transparency Masters
    - Written Test
- Handouts (as appropriate)

  ☑ **NOTE:** The components listed above may be photocopied by the instructor.

- Other required media (as appropriate)

Student Workbook

- Objective Sheets
- Information Sheets
- Assignment Sheets
- Job Sheets

Instructor's materials include the *Instructor's Manual*, the *Instructor's Resource Package*, and the *Student Workbook*. There is also a required media pack that can be purchased from the Curriculum and Instructional Materials Center.

Unit components are tied to measurable and observable learning outcomes. Instructor's are encouraged to supplement unit components with other resources to make units as responsive to local conditions and student needs as possible.

Most units of instruction are designed for use in more than one lesson or class period. Instructors should determine the following for each unit:

- amount of material that can be covered in each class period;
- skills that must be demonstrated;
- supplies and equipment needed;
- amount of class time needed for demonstrations;
- amount of class time needed for student practice;
- supplementary materials to be ordered; and
- resource persons who must be contacted.

Objective Sheet (Student Workbook)

The Objective Sheet summarizes each unit for the student and the instructor. The Objective Sheet includes the following sections:

Introduction – This section introduces students to the unit topic and its importance to them. The Introduction also relates the unit to students' experiences and their "need to know"; it helps capture their interest and focus their attention on the specific topic.

Prerequisites – This section is included if any of the units in the book have prerequisites. A prerequisite may be one or more units from the same book or from other books, which must be completed before beginning the unit. (If no prerequisites exist for any of the units in the book, this section is omitted.)

Focus assignments – Each unit has two Focus assignments: Prereading and Writing. The Prereading assignment requires the student to read appropriate sections from unit references, from the *Instructor's Resource Package*, or from the student's textbook. The Prereading assignment leads into the Writing assignment, which assigns students a short written activity based on the Prereading assignment. Because the Focus assignments help promote the use of basic skills, they include appropriate basic skill icons and enablers. (Activities for the basic skills associated with the Focus assignments are included in the Instructional Supplement in the Instructor's Manual.)

Unit Objective – The unit objective states the overall goal of the unit. It identifies what the student will be able to do after successfully completing the unit, as well as the standards used to measure student performance.

Specific Objectives – The specific objectives outline the teaching sequence of the competencies required to reach the unit objective.

The Specific Objectives on the Objective Sheet should be emphasized to all students at the start of each unit and throughout the teaching/learning process. This will help answer student questions about performance requirements for each unit. Specific Objectives can also assist instructors in determining teaching strategies and instructional methods. Instructors should prepare for each unit by deciding how each objective could best be taught.

Instructors should modify, delete, or add objectives to meet the needs of students and the community. When objectives are added, the instructor should remember to provide the needed information, Assignment and/or Job Sheets, and criterion-referenced test items.

Information Sheet (Student Workbook)

The Information Sheet provides the "must know" content essential for meeting the cognitive objectives in the unit. Information is usually presented in print on the Information Sheet, but may also be presented in other formats, if appropriate, such as on videotape, software, or other media. (Additional formats for presenting the Information Sheet objectives allow this component to be interactive.)

Many objectives on the Information Sheet begin with a "Words You Should Know" section. This boxed item identifies terms relating to the objective, and gives a definition for each. Terms in the "Words You Should Know" boxes are tested only indirectly with the objective information (not on the Written Test as a matching exercise).

The Information Sheet may include clarifying NOTES and EXAMPLES, as needed. In the left column, students and instructors are reminded of the optional and/or required activities and resources available for a particular objective.

Students should read the Information Sheet for each unit before it is discussed in class. Space is provided in the margins for both students and instructors to add notes that clarify and/or expand upon the information presented.

Assignment Sheets (Student Workbook)

The Assignment Sheets address the learning levels at or above the application level of Bloom's taxonomy. They allow students to perform non-psychomotor activities related to occupational tasks. Assignment Sheets also provide students with an opportunity to use higher-order thinking skills, such as problem-solving, synthesizing, analyzing, and evaluating. In addition, they may provide opportunities for cooperative learning and more detailed oral/written communication activities.

Assignment Sheet activities can be "paper and pencil" activities, as well as those using computer software, videotapes, models, handouts, or other resources as appropriate. All Assignment Sheets include basic skills icons and enablers (identified in the left margin).

Job Sheets (Student Workbook)

Job Sheets gives students step-by-step procedures for performing manipulative or psychomotor occupational tasks or jobs. The Job Sheet also functions as a Skill Test Record, facilitating the instructor's evaluation of each student's performance. Both the process and the end-product are evaluated. Diagrams, illustrations, and photographs are included, as needed, to assist students in completing the job.

Individual Job Sheets may include various warnings written to conform to the latest specifications of the American National Standards Institute (ANSI). DANGER is used if the situation *will* lead to death or serious injury if not avoided; WARNING is used if the situation *could* lead to death or serious injury if not avoided; CAUTION is used if the situation could lead to minor or moderate injury; NOTICE is used if the situation could cause property damage only; and IMPORTANT is used to refer to operating or maintenance tips. Each type of warning appears on the Job Sheet with an ANSI symbol.

The instructor should demonstrate the procedure outlined in each Job Sheet. Instructors may also have to localize specific procedures.

Instructor's Guide (Instructor's Manual)

The Instructor's Guide leads instructors step by step, objective by objective through the unit. It recommends instructional strategies for the Focus Assignments and for each of the Specific Objectives. Resources and activities are labeled "R" for "Required" or "O" for "Optional." Optional and Required resources (publications, videos, computer software, and other media) are listed, as well as unit references. These resources can be used to supplement the instructor's knowledge of the subject area and to help students with particular interests or occupational objectives. In addition, the Instructor's Guide provides guidelines for evaluating student performance.

Instructors should study the Instructor's Guide before introducing the unit and allow time to obtain supplemental materials, prepare audiovisual materials, and contact outside resource persons. Specific tasks of the instructor will vary with each unit.

Answers (Instructor's Manual)

This component lists the answers to all of the Assignment Sheets and the Written Test questions.

Test Code Sheet (Instructor's Manual)

The Test Code Sheet matches Written Test questions to objectives. Basic skills codes are listed in chart format for each question. Each unit has a Test Code Sheet. For more information, see the CIMC publication *Measuring Learning & Competency Gains: The Pretest/Posttest Approach.*

Instructional Supplement (Instructor's Manual)

The Instructional Supplement provides the instructor with strategies for teaching the basic skills identified on the Focus Assignments, Assignment Sheets, and Job Sheets. One Instructional Supplement applies to all of the basic skills identified in all of the units of instruction in a book.

LAP Sheet (Instructor's Resource Package)

The LAP (Learning Activity Package) Sheet for each unit allows the instructor to individualize instruction for some or all students. The LAP Sheet guides the student through each unit step by step, ensuring that the student receives the necessary instruction.

Transparency Masters (Instructor's Resource Package)

Transparency Masters are provided so that instructors can make transparencies to accompany specific units. Transparencies allow students to *see* as well as hear the information being presented, thus reinforcing the learning process. They also direct attention to the topic under discussion. Transparencies should be made from the Transparency Masters and placed where they will be readily available when needed. Transparencies should be left on the screen only when the related topics are under discussion.

Each Transparency Master also appears in the appropriate unit in the Student Workbook, at the location where the information is referenced (such as a Figure on the Information Sheet).

Written Test (Instructor's Resource Package)

The Written Test provides criterion-referenced evaluation of the Specific Objectives from the Information Sheet (Assignment Sheet and Job Sheet objectives are not evaluated by the Written Test). If instructors have added, deleted, or modified any objectives, appropriate changes should be made to the Written Test as well.

The Written Test serves as both a pretest and a posttest. In order to measure and document student competency gains as required by the latest Carl Perkins regulations, and as outlined in the Oklahoma-developed system of standards and measures, it is *essential* that the same test be used as a pretest and as a posttest. If instructors choose to use tests other than the Written Test, they should make sure that the same instrument is used for each activity – pre- and posttest.

The Written Test may be photocopied for classroom use, or additional copies may be ordered from the CIMC by calling 1-800-654-4502, or (in Oklahoma) 1-800-522-5810, ext. 589.

A detailed explanation of the Oklahoma plan for standards and measures and the Carl Perkins requirements is included in the CIMC publication *Measuring Learning & Competency Gains: The Pretest/Posttest Approach.* This booklet – and accompanying software to assist in calculating and recording student gains – are available to Oklahoma instructors through their school's vocational testing liaison.

To further assist instructors, the CIMC develops Test Code Sheets for each Written Test in its more recent publications, including this one. (These sheets are explained in detail in the publication mentioned above.) The Test Code Sheets assist in verifying that the Written Test is a valid instrument for measuring student learning and competency gains.

COMPETENCY PROFILES

A Competency Profile is available from the CIMC. Competency Profiles document student performance. Each profile lists the specific competencies covered in the book, and provides space for recording the student's level of performance on each competency.

PAGE NUMBERING

Each unit and each page in a CIMC publication has a number, shown in arabic numerals. The page number gives the package title, the book title, the component name, the unit number, and the page number within the unit. For example, the page number for page 1 in Unit 6 of the *Student Workbook* would appear as follows:

STUDENT WORKBOOK – Equine Management and Production
OBJECTIVE SHEET · **CIMC** · A1 · 1

METHODS OF DISSEMINATING MATERIAL

For best results, provide each student with a copy of the Student Workbook. Students should be allowed to keep their Workbooks at the end of the course or training program.

TEACHING METHODS

Keeping students motivated is a challenge. Supplement each unit with current information, personal experiences, and other information. In a group setting, prepare for each unit by determining the best way to teach each objective, and allow for student input. For individualized instruction, provide opportunities for the student to become involved in planning and being responsible for his or her own education.

BASIC SKILLS IN CURRICULUM

The CIMC has always been mindful of the importance of reinforcement (and sometimes remediation) of students' academic skills as they progress through vocational training, and has always included activities in its materials to enhance and promote use of these skills.

Recent state and federal legislation mandates vigorous basic skills development in vocational education in the wake of demands by industry that workers *must* be academically, as well as technically, competent, given the nature of the highly complex work place. In response, the CIMC has taken the following steps to document that, indeed, the instructional materials *do* combine academic skills training with the vocational training. In addition, concerted efforts have been made to "beef up," or enhance the basic skills instruction already present. Following is a brief description of those processes:

Basic Skills Icons and Enablers

To assist teachers and students in identifying activities that promote basic skills development, the CIMC has implemented a marking system that uses simple graphic symbols, or icons, and a list of specific tasks, or enablers, to identify the basic skill or skills that are called for in each job or assignment sheet.

Each of the nine broad skills areas–reading, writing, mathematics, science, oral communication, interpersonal or relating, creative thinking and problem solving, employability, and social studies–is represented by the icon presented below.

Reading

Science

Creative Thinking/ Problem Solving

Writing

Oral Communication

Employability

Math

Interpersonal or Relating

Social Studies

When an activity involving one of these basic skills is identified, the corresponding icon is placed in the left-hand margin of the job or assignment sheet. The basic skills training is further defined by retrieving the specific, or enabling, skill that is required by consulting a list of over two hundred and fifty enablers that has been compiled and grouped with each general basic skill. This enabling skill is placed directly below the icon.

As an example, an exercise that requires a student to conduct library research would make necessary the use of specific reading comprehension and research and reference skills. The basic skills that the exercise promotes would be depicted in the left-hand margin as follows:

ASSIGNMENT SHEET — *PLANNING LIVING SPACE FOR HUMAN NEEDS* 1

Name ______________________________ Score __________

OBJECTIVE 10 **Define personal territory.**

INSTRUCTIONS

Reading Comprehension
- Gain factual information

Functional Reading
- Follow written instructions
- Use content area vocabulary

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

- As discussed in Objective 1, each person has an invisible "space bubble" or comfort zone. A comfort zone is the space between oneself and others that brings a feeling of well-being. When one's comfort zone is crowded or invaded, discomfort often results. Therefore, personal territory needs should be a prime consideration when planning living space.
- For each of the following situations, draw your estimated comfort zone around the figures provided.
- Indicate how many inches from your body the comfort zone extends.
- Consider how that comfort zone changes in different situations. Answer the questions that follow.

Basic Skills Documentation Matrix

Another component of the CIMC basic skills instructional plan is the "Basic Skills Documentation Matrix." The matrix graphically summarizes the basic skills training included in the vocational program, unit by unit. It should be helpful to teachers in planning their instruction, and to administrators as documentation that basic skills **are** being addressed during the vocational training.

The matrix for this publication is included as an 8½" by 11" foldout in this *Instructor's Manual.*

Matrices have been developed for most CIMC publications. For more information on those available for other programs, call the CIMC at 1-800-654-4502.

Instructional Supplement

The supplement is a tool for the instructor to use in helping students apply the basic skills in Assignment Sheets and Job Sheets. Some supplements are appropriate for use with all students; some are for use only with those students who do not understand the academic skills called for in the exercise.

Safety

Procedures described in required videos may be abbreviated or shortened for instructional purposes. Procedures should, therefore, never be attempted by students without your qualified professional supervision.

MEASURING STUDENT PERFORMANCE GAINS

When you examine this book, you will notice that separate written pretests are no longer included in the units of instruction. Each CIMC unit now contains only a single Written Test. This test should be used as **both** pretest and posttest by giving it once before students start a unit and again when they have completed the unit.

The reason for using a single instrument as both pretest and posttest is so that direct comparison of each student's competencies before and after instruction can be made accurately. This comparison enables precise calculation, documentation, and evaluation of student **performance gains**.

Accurate performance gains analysis is an important requirement of the new Carl Perkins legislation for vocational education. Teachers can make an important contribution to the performance accountability mandated by the new federal legislation by carrying out accurate performance gains analysis for their students, and making this data available to students, parents, and administrators.

This analysis is easy to do and requires only simple calculations and record keeping. Detailed information regarding performance gains analysis is contained in the CIMC publication, *Measuring Learning & Competency Gains: The Pretest/Posttest Approach.* In addition, the CIMC has developed a computer program, CARL, which will perform all necessary calculations and will print out a record form of all information required for gain score analysis. Copies of CARL and the publication are available through your local testing liaison (in Oklahoma), or from the CIMC at 1-800-654-4502.

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REQUIRED CRITERIA FOR A COMPETENCY-BASED EDUCATION PROGRAM

Criterion	**Discussion**	**CIMC component meeting criterion**
1. Instruction is based on clearly-stated learning objectives that are: a) observable and measurable, and b) communicated in writing to students before instruction begins.	Learning objectives drive CBE. Objectives are the "competencies" that learners must achieve. Each objective must clearly state what *learners* must *do* to demonstrate acquired skill or knowledge. Verbs in learning objectives are active and precise, stating the exact performance expected of learners. The objectives should also specify the standard or level of performance required. Objectives can be at any level of Bloom's Taxonomy and can include the cognitive, psychomotor, and affective domains. Higher-order cognitive skills should be included.	Objective Sheet
2. Instruction is aligned with the stated learning objectives	In CBE, the objectives specify what is taught. "Content" should relate to one or more objectives. The curriculum should cover all objectives with relevant information.	Information Sheet
3. There is a student evaluation system that is: a) criterion-referenced, and b) aligned to the learning objectives and the curriculum.	In CBE, the aim is to bring the performance of *all* learners up to a pre-defined standards and competencies. Learners work on each competency until they achieve "mastery"; the evaluation system should test and record this mastery. Learners can restudy and retest as often as needed. Specific remediation activities should also be available to learners when needed. The evaluation system focuses on what each student has achieved, not on what the instructor has "taught." The "constant" in CBE is student performance; the "variables" are time and resources. (This differs from traditional systems where learners get one chance at mastery; some succeed and some fail. In such systems, time and resources are constant and student achievement is variable.) If an evaluation is criterion-referenced, successful learner performance is defined by (or *referenced* to) mastery of pre-set objectives and standards (or *criteria*): there must be a careful match (or *alignment*) between what the student should master (objectives), what is taught (curriculum), and what is tested. Objectives, curriculum, and evaluation system must all match.	Written Test and Job Sheet/Skill Test

Criterion	Discussion	CIMC component meeting criterion
4. There is an observable management system of cognitive skill practice that provides for, promotes, and documents mastery learning.	For both cognitive and psychomotor skills, a CBE program must have a system of maintaining records of which skills and activities each learner has completed, which ones are in progress, and which ones have not yet been completed. Completion means "mastery"; no skill is completed until the learner has achieved the mastery level. The record system should promote feedback on student skill attainment to *both* instructor and learners, provide for remediation as needed, and encourage reevaluation of learner performance until mastery is achieved. Appropriate remediation strategies often should consider learning styles and other individual differences among learners. Learners should work on skills and activities until they achieve mastery. They should not be "passed on" without mastery. While learners may move ahead and work on other skills (i.e those for which all prerequisite skills have been mastered or those without prerequisites), work should also continue on the skills still requiring mastery. Students should not attempt higher-order skills until all prerequisite skills are mastered.	Assignment Sheet
5. There is an observable management system of psychomotor skill practice that provides for, promotes, and documents mastery learning.		Job Sheet/Skill Test
6. Skill mastery records are maintained for each learner, and learners have access to and make use of these records to monitor their skill acquisition.	Records should clearly indicate the skills each learner has mastered. One such record should profile or list the competencies that have been mastered and those to be mastered. Other performance indicators can be added and kept in a portfolio for each learner. Learners should have ready access to their portfolios to monitor their own progress in skill mastery and competency attainment.	Competency Profile

CORRECTIONS AND SUGGESTIONS

The Curriculum and Instructional Materials Center (CIMC) wants to provide vocational instructors and students with accurate and effective materials. Although the CIMC strives to maintain the highest standards of development and production, oversights sometimes do occur. If you find any errors in this or other CIMC publications, or have suggestions for improving their usefulness in vocational programs, please notify the CIMC staff. To do this, please identify the page(s) affected and write any comments to clarify the error or suggestion. Use the spaces below. Then, simply fold (bottom of page *upward*, top *downward*), secure, and mail.

This information will be used to correct the publication before the materials are reprinted. To ensure that the material is updated on a timely basis, notify the CIMC of necessary corrections as soon as possible after discovering the error.

2 Fold downward

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Page: Comment:

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PLACE
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OKLAHOMA DEPARTMENT OF
VOCATIONAL AND TECHNICAL EDUCATION/CIMC
1500 W. 7TH AVE
STILLWATER OK 74074-9907

INSTRUCTOR'S GUIDE

THE EQUINE INDUSTRY

A1

Required Activities and Resources (R)

These are fully integrated components of this CIMC curriculum. They are usually packaged in or with the curriculum and are essential in meeting the learning objectives. To individualize this unit, use the LAP Sheet supplied in your resources.

- Reproducible Handouts and Transparency Masters are included in the Instructor's Resource Package. Handouts should be copied for all students. Transparency Masters should be used to make overhead transparencies for using during instruction. A small copy of each Transparency Master appears in the student's Information Sheets.
- Non-reproducible resources are included in the student's curriculum.

Optional Activities and Resources (O)

These are suggested high-interest activities to help deliver learning objectives to students or to let students achieve objectives in an applied context. Select as many as you wish to use. Some activities use extra resources for further information about the unit content. You can make them available in the classroom for in-depth study or optional activities, but their use is not required for meeting CIMC unit objectives.

FOCUS ASSIGNMENTS

Prereading

R Have the students read the Handout *Horse Business is Big Business.*

Writing

R Have the students write a short summary of how they believe the equine industry affects the local area.

O Have students look through the yellow pages of a nearby metropolitan area and find businesses related to the equine industry.

GENERAL INSTRUCTIONS

Assignment Sheets

- R Review the directions and any specific guidelines.
- R Make certain that any needed materials from the Instructor's Resource Package are available.
- R Have the students complete the Assignment Sheet. Evaluate each student's performance and provide reteaching and retesting as necessary. Have the students repeat the Assignment Sheet until they achieve mastery.
- R Complete each student's Competency Profile.
- O Have the students volunteer to read aloud the directions and any special guidelines.
- O Return the completed Assignment Sheets to the students so that they may use them for later reference if needed.

Job Sheets

- R Review the introduction and evaluation criteria for the Job Sheet. Remind the students that they should not fill in the blanks in the Yes/No columns.
- R Review and explain all general guidelines, safety cautions, and warnings.
- R Make sure that all tools, equipment, and supplies are available.
- R Demonstrate each of the procedures outlined in the Job Sheet.
- R Allow the students to practice the Job Sheet skills before skills testing. Coach, correct, and supervise as necessary.
- R Have the students complete the Job Sheet. Evaluate each student's performance and provide remediation as necessary. Have the students repeat the Job Sheet until they achieve mastery.
- R Complete each student's Competency Profile.
- R Return the completed Job Sheets to the students so that they may use them for later reference if needed.
- O Have the students volunteer to read aloud the job guidelines, cautions, and warnings.

LAP Sheets

The LAP Sheets are an optional component that can be used to individualize instruction. The following instructions should be followed only if you are using the LAP Sheets.

R Explain the specific procedures to be followed to the students before they begin using the LAP Sheet. Be sure that each student understands the procedures for using the LAP Sheet.

R If you want the student to complete any of the assignments on the LAP Sheet that are labeled optional, assign these to the student. Be sure to provide any needed resources.

OBJECTIVE 1

Match stages of evolutionary development of the horse to their descriptions.

O Discuss how the horse has been used throughout history. For example, how horses were used for agricultural work.

O Show one or both of the videos *The Horse & Society* and *On the Fifth Day.*

OBJECTIVE 2

Match terms related to basic horse terminology to their definitions.

O Discuss the basic horse terminology. Ask students if they can think of other terms relating to the equine industry, such as farrier, etc.

OBJECTIVE 3

List five ways horses can be used.

O Ask students for examples of the different uses of horses. Ask students what they think the majority of horses in your area are used for.

O Show one of the following videos: *All In A Day's Ride, What Makes Him Run, The Story of American Quarter Horse Racing.*

O Discuss that horses are also used for slaughter. In some countries horse meat is commonly eaten. Explain that horse owners and caretakers need to be aware that horses sold at some auctions or horses that are stolen may end up in packing plants. Ask students for their opinions.

OBJECTIVE 4

Identify the five common horse breeds in the state.

R Show students the slide set of the five common breeds. Identify each breed for the students. Discuss differences in the breeds.

O Discuss other breeds of horses and their uses.

O Show one or both of the videos *An American Treasure* and *Image of Excellence.*

OBJECTIVE 5

Write a letter to a breed association requesting information on that breed. (Assignment Sheet 1)

R See the general instructions for all Assignment Sheets.

R Give students the Handout on breed associations.

R Collect student letters and group them according to association. Place students who wrote to the same association in a group. Have the group vote on the best letter. Have students look at grammar, spelling, punctuation, and clarity. After the students have voted on the best letters, send those letters to the breed associations.

O Have students write a report or give a short oral presentation on a specific breed.

OBJECTIVE 6

Describe three job opportunities in the equine industry that interest you.

R Show the video *Unbridled Opportunities: Careers in the Horse Industry.*

R Discuss careers in the equine industry.

O Have guest speakers from equine related jobs come in and speak to the class.

O Videotape people speaking about their jobs in the equine industry and show the videotape to students who may miss speakers or must complete the unit as a lap.

OBJECTIVE 7

Complete a career search form. (Assignment Sheet 2)

R See the general instructions for all Assignment Sheets.

EVALUATION

Pretest

- Use the unit Written Test for *both* the pretest and posttest. Give the students the pretest before they begin the unit.

- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving pretests and using the results. Information for ordering this material is included in the optional resources section.

- Use pretest results to guide individual students in progressing through the unit, doing enrichment work, or moving to the next unit.

Focus Assignment

- Use an informal evaluation of the focus assignments as a diagnostic tool for determining if any students need extra help in reading comprehension or writing skills. Refer these students to their English instructor, Learning Resource Center, or Educational Enhancement Center.

Assignment Sheet

- Evaluate students on Assignment Sheet activities. Students must repeat an Assignment Sheet until they have mastered the activity.

- Complete each student's Competency Profile.

Skill Test

- Explain to the students that they will be asked to demonstrate the procedures on the Job Sheets as a skills test.

- Describe the rating scale used on the skills test.

- Reteach and retest as necessary.

- Complete each student's Competency Profile.

Posttest

- After they have completed the unit, give students the Written Test again.

- Explain to the students that they will be asked to demonstrate on the Written Test actions listed in the specific objectives.

- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving posttests and using the results. Information for ordering this material is included in the optional resources section.

- Reteach and retest as necessary to meet individual student needs and state standards for student learning and competency gains.

- Complete the appropriate sections of the Competency Profiles.

- Review individual and group performance to evaluate teaching effectiveness. Adjust scope, sequence, or instructional methods for additional lessons as required.

REQUIRED RESOURCES

The items marked with an asterisk are included in the Instructor's Resource Package.

Publications

- *Horse Business is Big Business*. Handout 1.*

- *Breed Associations*. Handout 2.*

Videos

- *Unbridled Opportunities: Careers in the Horse Industry*. Washington, DC: American Horse Council.

  ☑ **NOTE:** This video is included in the Media Package available through CIMC.

Computer Software

- *Career Search*. Stillwater, OK: Oklahoma Department of Vocational and Technical Education.

OPTIONAL RESOURCES

Publications

- *The Economic Impact of the Horse Industry.* Washington, DC: American Horse Council. For ordering information contact the American Horse Council, 1700 K Street, NW, Suite 300, Washington, DC 20006-3805, (202) 296-4031.

- *Horse Industry Directory.* Washington, DC: American Horse Council. For ordering information contact the American Horse Council, 1700 K Street, NW, Suite 300, Washington, DC 20006-3805, (202) 296-4031.

- *Measuring Learning and Competency Gains: The Pretest/Posttest Approach.* Stillwater, OK: CIMC, Oklahoma Department of Vocational and Technical Education, 1992. For ordering information call 800-522-5810.

Videos

The following are American Quarter Horse Association videos:

- *All In A Day's Ride.* This video presents a depiction of the modern cowboy's life.

- *America's Horse.* This video provides an in-depth look at the American Quarter Horse.

- *The Horse & Society.* This video discusses the importance of horses in the development of civilization.

- *On the Fifth Day.* This video documents horses from prehistoric time to the beginning of the American Quarter Horse breed.

- *The Right Start.* This video focuses on the American Junior Quarter Horse Association and AQHA supported youth programs.

- *The Story of American Quarter Horse Racing.*

- *What Makes Him Run.* This video looks at American Quarter Horse racing.

☑ **NOTE:** For information on the above videos contact the American Quarter Horse Association, P.O. Box 200, Amarillo, TX 79168, (806) 376-4888 extension 201. The American Quarter Horse Association has free loan reservations for videos. Videos should be reserved 30 to 60 days in advance of viewing date.

- *An American Treasure.* American Paint Horse Association, P.O. Box 961023, Fort Worth, TX 76161-0023, (817) 439-3400.
- *Image of Excellence.* American Saddlebred Horse Association, 4039 Iron Works Pike, Lexington, KY 40511.

UNIT REFERENCES

Publications

- *Equine Science.* College Station, Texas: Instructional Materials Service, Texas A&M University, 1990.
- Evans, J. Warren. *Horses: A Guide to Selection, Care, and Enjoyment.* New York: W.H. Freeman and Company, 1989.
- Scheid, Dan W. and H. Lee Schwanz. *How to Buy a Healthy Horse.* Brookfield, Wisconsin: Farmer's Digest, Inc., 1985.
- Trahan, Ronald. *Careers for Horse Lovers.* Boston: Houghton Mifflin Company, 1981.
- Wagoner, Don M. *Conditioning to Win.* Tyler, Texas: Equine Research Publications, 1974.

Videos

- *Unbridled Opportunities: Careers in the Horse Industry.* Washington, DC: American Horse Council.

ASSIGNMENT SHEETS

OBJECTIVE 5

Assignment Sheet 1

Student letters should contain correct grammar, spelling, and punctuation. The letters should follow a standard format for business letters and ask for information on a specific breed.

Assignment Sheet 2

Student answers will vary. Students should state at least two specific occupations and give advantages and disadvantages of the jobs.

WRITTEN TEST

OBJECTIVE 1

1. H
2. F
3. A
4. C
5. D

OBJECTIVE 2

1. M
2. L
3. O
4. V
5. K
6. F
7. S
8. Q
9. E
10. C
11. B
12. T
13. A
14. W
15. I
16. N

OBJECTIVE 3

Answers should include the following in any order:

- Pleasure or recreation
- Show
- Racing
- Rodeo, trail, and sports events
- Work

OBJECTIVE 4

Answers should include the following in the order that they were shown:

- Quarter Horse
- Paint
- Arabian
- Appaloosa
- Thoroughbred

OBJECTIVE 5

Evaluated on Assignment Sheet 1.

OBJECTIVE 6

Answers should include a brief description of three job opportunities in the equine industry.

OBJECTIVE 7

Evaluated on Assignment Sheet 2.

CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) EQUINE MANAGEMENT AND PRODUCTION

UNIT NUMBER AND TITLE A1 – THE EQUINE INDUSTRY

TOTAL NUMBER OF TEST QUESTIONS 34

TOTAL NUMBER OF BASIC SKILL QUESTIONS 8

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
1	1-5	S
2	1-16	X
3	1-5	X
4	1-5	X
5	Evaluated on AS 1	
6	1-3	W, E
7	Evaluated on AS 2	

INSTRUCTOR'S GUIDE

SAFETY

A2

Required Activities and Resources (R)

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Optional Activities and Resources (O)

These are suggested high-interest activities to help deliver learning objectives to students or to let students achieve objectives in an applied context. Select as many as you wish to use. Some activities use extra resources for further information about the unit content. You can make them available in the classroom for in-depth study or optional activities, but their use is not required for meeting CIMC unit objectives.

FOCUS ASSIGNMENTS

Prereading

R Have the students read the Handout *Young Boy Seriously Injured in Horse Mishap.*

Writing

R Have the students write a short (one paragraph) discussion on what the boy did wrong and how the accident might have been prevented.

GENERAL INSTRUCTIONS

Assignment Sheets

R Review the directions and any specific guidelines.

R Make certain that any needed materials from the Instructor's Resource Package are available.

R Have the students complete the Assignment Sheet. Evaluate each student's performance and provide reteaching and retesting as necessary. Have the students repeat the Assignment Sheet until they achieve mastery.

R Complete each student's Competency Profile.

O Have the students volunteer to read aloud the directions and any special guidelines.

O Return the completed Assignment Sheets to the students so that they may use them for later reference if needed.

Job Sheets

R Review the introduction and evaluation criteria for the Job Sheet. Remind the students that they should not fill in the blanks in the Yes/No columns.

R Review and explain all general guidelines, safety cautions, and warnings.

R Make sure that all tools, equipment, and supplies are available.

R Demonstrate each of the procedures outlined in the Job Sheet.

R Allow the students to practice the Job Sheet skills before skills testing. Coach, correct, and supervise as necessary.

R Have the students complete the Job Sheet. Evaluate each student's performance and provide remediation as necessary. Have the students repeat the Job Sheet until they achieve mastery.

R Complete each student's Competency Profile.

R Return the completed Job Sheet to the students so that they may use them for later reference if needed.

O Have the students volunteer to read aloud the job guidelines, cautions, and warnings.

LAP Sheets

The LAP Sheets are an optional component that can be used to individualize instruction. The following instructions should be followed only if you are using the LAP Sheets.

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OBJECTIVE 1

Describe the senses of the horse.

R Use the Transparency Master to illustrate the blind spot of the horse.

O Compare the senses of the horse to the senses of humans.

OBJECTIVE 2

Describe general temperament types of horses.

O Discuss the general temperament types of horses. Ask students to describe the temperament types of horses they have been around.

OBJECTIVE 3

Match horse behaviors to their descriptions.

O Discuss horse behaviors. Give examples of different behaviors and ask students for the name of the behavior.

OBJECTIVE 4

Discuss the body language of horses.

O Explain that horse's have body language just as people do. Ask students for examples of the body language people might display. For example, a person who is angry may cross their arms and tense up. Explain that just as people communicate through body language so do horses.

OBJECTIVE 5

List the types of horse vices and give three examples of each.

O Explain that vices are negative traits in horses and can be dangerous both for the horse and the individuals working with the horse.

OBJECTIVE 6

List the reasons for vices.

O Emphasize that many vices can be prevented or curtailed by proper management practices. For example, a horse who is fed "treats" out of a hand may come to expect treats and will become upset if not given them and may start biting at handlers.

OBJECTIVE 7

Analyze descriptions involving horse behavior and body language. (Assignment Sheet 1)

R See the general instructions for all Assignment Sheets.

OBJECTIVE 8

Describe appropriate dress for working around horses.

O Explain that individuals should follow the dress guidelines of the facility where they are located. If in a work situation, employees should check with their employer regarding dress guidelines.

OBJECTIVE 9

Distinguish between safe and unsafe practices when approaching a horse.

O Ask students for examples of unsafe practices when approaching a horse.

OBJECTIVE 10

Distinguish between safe and unsafe practices when handling the horse.

O Ask students for examples of unsafe practices when handling the horse.

OBJECTIVE 11

Describe safe practices when leading the horse.

O Ask students for examples of unsafe practices when leading the horse.

OBJECTIVE 12

Describe safe practices when tying the horse.

O Ask students for examples of what may happen if safe practices are not followed. For example, if too much slack is left in the lead rope the horse may be able to place a foot over the lead rope and injure itself.

OBJECTIVE 13 **Tie a quick release knot. (Job Sheet)**

R See the general instructions for all Job Sheets.

OBJECTIVE 14 **Explain safety procedures in the horse barn or facility.**

O "Set up" a barn or facility with unsafe procedures. For example, leave a tool in the aisle. Take students through and ask them to point out any unsafe practices. Be sure to pick up any equipment or tools after students have walked through the facility.

OBJECTIVE 15 **Explain safety procedures in corral, paddock, and pasture.**

O Discuss the consequences of poor safety practices in the corral, paddock, and pasture.

O Show the appropriate sections of the video *When Should I Call the Vet, Part II* for examples of what can happen if safe procedures are not followed.

OBJECTIVE 16 **List types of restraints.**

O Display different types of restraints for students to examine.

O Show the video *Methods of Restraining Horses*.

OBJECTIVE 17 **Describe safety considerations when restraining horses.**

O Discuss safety considerations when restraining horses. Emphasize that many accidents happen when people are trying to restrain horses.

O Show the video *Methods of Restraining Horses*.

OBJECTIVE 18 **Analyze horse handling procedures for correct and incorrect safety practices. (Assignment Sheet 2)**

R See the general instructions for all Assignment Sheets.

OBJECTIVE 19

Describe legal and ethical obligations for reporting mistreatment of horses.

R Discuss what obligations are involved in owning or caring for horses. Discuss the following obligations:

- Provide proper feed and water
- Grooming
- Veterinary care
- Shelter
- Exercise
- Attention
- Proper treatment

O Emphasize that allegations of mistreatment are serious and that before reporting any allegations individuals should be confident that the mistreatment has occurred.

O Discuss that in most places the local police department or sheriff's department will be able to handle mistreatment cases or direct the complaint to the proper personnel.

OBJECTIVE 20

Analyze scenarios of reporting abuse and neglect of horses. (Assignment Sheet 3)

R See the general instructions for all Assignment Sheets.

O Give students examples of animal abuse cases (either horses or other animals). For example, have there been any cases reported in the newspapers over the last year.

O Explain that in some places horses are sold for slaughter which is not illegal, even though many people may disapprove of the practice. Ask students for their opinions on this subject.

EVALUATION

Pretest

- Use the unit Written Test for *both* the pretest and posttest. Give the students the pretest before they begin the unit.

- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving pretests and using the results. Information for ordering this material is included in the optional resources section.

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- Evaluate students on Assignment Sheet activities. Students must repeat an Assignment Sheet until they have mastered the activity.

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Skill Test

- Explain to the students that they will be asked to demonstrate the procedures on the Job Sheets as a skills test.

- Describe the rating scale used on the skills test.

- Reteach and retest as necessary.

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Posttest

- After they have completed the unit, give students the Written Test again.

- Explain to the students that they will be asked to demonstrate on the Written Test actions listed in the specific objectives.

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- Reteach and retest as necessary to meet individual student needs and state standards for student learning and competency gains.

- Complete the appropriate sections of the Competency Profiles.

- Review individual and group performance to evaluate teaching effectiveness. Adjust scope, sequence, or instructional methods for additional lessons as required.

REQUIRED RESOURCES

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Publications

- *Young Boy Seriously Injured in Horse Mishap.* Handout on safety practices.*

OPTIONAL RESOURCES

Publications

- Ainslie, Tom and Bonnie Ledbetter. *The Body Language of Horses.* New York: William Morrow and Company, Inc., 1980.

- Evans, J. Warren. *Horses: A Guide to Selection, Care, and Enjoyment, (2nd ed.).* New York: W.H. Freeman and Company, 1989.

- *Measuring Learning and Competency Gains: The Pretest/Posttest Approach.* Stillwater, OK: CIMC, Oklahoma Department of Vocational and Technical Education, 1992. For ordering information call 800-522-5810.

Videos

- *Methods of Restraining Horses.* Santa Monica, CA: Equestrian Video Library, 1987.
- *When Should I Call the Vet, Part II.* La Jolla, CA: Lawlor Productions, 1988.

UNIT REFERENCES

Publications

- Ainslie, Tom and Bonnie Ledbetter. *The Body Language of Horses.* New York: William Morrow and Company, Inc., 1980.
- *Equine Science.* College Station, Texas: Instructional Materials Service, Texas A&M University, 1990.
- Evans, J. Warren. *Horses: A Guide to Selection, Care, and Enjoyment.* New York: W.H. Freeman and Company, 1989.
- Hawcroft, Tim. *The Complete Book of Horse Care.* New York: Howell Book House, 1992.
- *Safety: Catching, Leading, Grooming.* 4-H Horse Project Publication, Management, MGME-1.

ASSIGNMENT SHEETS

OBJECTIVE 7

Assignment Sheet 1

1. The mare is missing the companionship of the pony that they recently sold. She is running the fences and smelling the air for the absent companion. She is also nickering for the pony.
2. The gelding may have a bad temperament and Jack should probably reconsider purchasing it.
3. The horse is most likely frightened by something it sees under the feed manger.
4. The horse is eager to perform.
5. The horse in the stall next to the new horse is mimicking the behavior of chewing on the wood.

OBJECTIVE 18

Assignment Sheet 2

1. Jess should not tie the horse by the reins. The horse could injure itself.
2. Rob should always let the horse know what he is about to do. By grabbing the hoof he may frighten the horse.
3. Mike was correct not to put the horses in the pasture with the car. The horses could easily injure themselves on the car.
4. Jill should not have walked up behind the horse and patted it on the rump. The horse could not see Jill and may easily have kicked.
5. Monty was correct to check the stables for tack and equipment left out. Both horses and people can injure themselves on objects left out.

OBJECTIVE 20

Assignment Sheet 3

1. This is not a case of abuse or neglect. The horses are being cared for and are not suffering from the owner's actions. Although it might be desirable for the owner to spend more time with the horses, it is not a case of animal abuse or neglect.

2. This is a case of animal abuse and neglect. The horses are suffering because of the actions of the owner or caretaker and are in danger.

3. This is not a case of animal abuse or neglect. The owner is taking care of the animal and is taking steps to provide care for the injury.

4. This is a case of animal abuse. The man is clearly hurting the animal beyond what any reasonable person might do. The horse is in immediate danger of being injured. The man should not have purchased a horse that was for an experienced rider.

WRITTEN TEST

OBJECTIVE 1

1. Poor vision due to wide forehead, eyes perched laterally, and retina more concave in some places than others

2. Very good, superior to human's, due to shape of ears, ability to rotate ears, and ability to detect ground vibrations

3. Good sense of smell; used to become familiar with strange objects, food, and, by stallion, to detect mare in heat

4. Horses can differentiate tastes; less developed than other senses

5. Skin highly specialized sensory organ; most sensitive in areas of mouth, feet, flanks, neck, and shoulders

OBJECTIVE 2

1. The good-natured placid horse is quiet and somewhat sluggish with little interest in its surroundings. It is generally safe for beginners but does not often become highly-trained.

2. This type of horse is interested in its surroundings and pays attention to what is going on around it; it is agreeable and responds well.

3. The nervous horse is easily excitable and shies away from strange objects, movement, and noise.

4. The stubborn horse is difficult to train to be obedient, is slow to learn obedience, and requires tact and patience by the trainer.

5. The spoiled horse is accustomed to being treated in a certain manner and may react negatively to being treated differently than it is used to.

6. Bad-tempered horses are resentful and often have vices such as biting. They often lay their ears back and bare their teeth. Bad-tempered horses can be divided into two types, based on underlying motivation: horses that behave negatively because they have been severely or chronically abused or horses that have learned to behave in this manner to get their way.

OBJECTIVE 3

1. C
2. B
3. A
4. K
5. O
6. E
7. L
8. Q
9. I
10. N
11. F
12. G
13. T
14. R

OBJECTIVE 4

1. interested – The horse is intensely focused on object or person of interest; ears will be alert, eyes bright, and focused forward.

2. playful/happy – The horse is enjoying itself, will often raise its tail and flip its head up high.

3. eager – The horse is impatient to begin an activity and will often stamp its front foot and then its back foot, shake its head, and move sideways.
4. proud – The proud horse will have its ears forward, tail up, and will often flair its nostrils.
5. frightened – The frightened horse will focus its attention on the object of concern, become tense, move around restlessly, and sniff the air.
6. angry horse – The horse will show its anger by laying its ears back, swishing its tail, and tensing the hindquarters; as the horse becomes more irritated, the ears will become pinned down.
7. bored horse – The bored horse is often extremely mouthy, will mess around with items such as feed buckets, and may develop vices.
8. bereaved horse – The bereaved horse is longing for a missed companion and is restless, will sniff the air for scent, nicker, and race up and down the fences.
9. horse in pain – The horse in mild discomfort will often shrug the affected muscle, keep the weight off the sore foot or leg; the horse that is sick will become listless, less responsive, and will have a dull coat.

OBJECTIVE 5

Answer should include the following vices and three of the examples in any order:

- Aggressive vices – vices directed toward the handler or another horse
    - kicking
    - biting
    - charging
    - bucking
    - striking
- Flight responses
    - rearing

  - balking
  - shying
  - halter pulling
  - fleeing

- Stall vices
  - cribbing – The horse will set its upper incisor teeth against an object, arch its neck and swallow large quantities of air.
  - wood chewing
  - bolting food – The horse will gulp its food without chewing.
  - pawing
  - pacing
  - weaving – This is a rhythmical shifting of the weight of the forehand from one forefoot to the other.
  - tail rubbing

OBJECTIVE 6

Answers should include the following in any order:

- Boredom
- Poor management
- Mishandling
- Abusive treatment

OBJECTIVE 7

Evaluated on Assignment Sheet 1.

OBJECTIVE 8

Answer should include the following points:

- Wear comfortable, well-fitting clothing that will not snag or catch on objects.
- Wear footgear that protects feet from hazards such as being stepped on or being injured by nails or other objects around the stables.

- Wear gloves if working with ropes or in situations where cuts or splinters are likely to happen.
- Do NOT wear excessive jewelry that might catch or snag on objects.
- Wear appropriate riding attire for specific riding uses.

OBJECTIVE 9

1. U
2. S
3. S
4. S
5. U
6. U
7. S
8. U
9. S
10. S
11. S
12. U
13. S
14. U
15. S

OBJECTIVE 10

1. S
2. S
3. U
4. S
5. S
6. S
7. S
8. S
9. U
10. U
11. S
12. U
13. U
14. S
15. U

OBJECTIVE 11

Answer should include the following points:

- Lead a horse by walking slightly ahead of it on its near (left) side.
- Never wrap the lead rope or reins around your hand or wrist.
- Remember that horses are much larger and stronger than a person. Do NOT get in front of a horse and try to pull if it resists.
- Be cautious when leading a horse through narrow openings or strange surroundings.

OBJECTIVE 12

Answer should include the following points:

- Tie the horse to a secure object, using a quick release knot.
- Tie the horse far enough away from other horses to avoid kicking or biting. Horses should be tied at least 10 feet apart.
- Always walk around the horse, never under or over the tie rope.
- Always untie the lead shank before taking the halter off the horse.
- Tie the horse at its shoulder height or higher.
- Leave 24-30 inches between the knot and the halter.

OBJECTIVE 13

Evaluated on the Job Sheet.

OBJECTIVE 14

Answer should include the following:

- Do not leave tack, equipment, or other objects in aisles.
- Be certain all gates are secured.
- Provide proper sanitation.

OBJECTIVE 15

Answer should include the following:

- Be certain there are no objects that could potentially injure the horse in the corral, paddock, or pasture.
- Be certain all gates are secured.
- Use proper fencing.
- Do NOT leave bailing wire or barbed wire in corral, paddock, or pasture.

OBJECTIVE 16

Answer should include the following in any order:

- Tying
- Hobbles
- Twitches
- War bridles
- Tranquilizers

OBJECTIVE 17

Answer should include the following:

- Use the simplest method of restraint possible when working with horses.
- Use tranquilizers only under the direct supervision of a veterinarian.
- Use the appropriate method of restraint for the situation.
- Do NOT leave restraints on horses for extended periods of time.

OBJECTIVE 18

Evaluated on Assignment Sheet 2.

OBJECTIVE 19

Answer should include the following points:

- Horses cannot speak up for themselves if they are being abused or neglected; they must rely on individuals to bring the abuse or neglect to the attention of the proper authorities.

- Animal abuse is a misdemeanor crime in many states and a felony crime in some states. A person engaging in animal abuse or neglect is breaking the law.

- Be certain that the case is an actual case of abuse or neglect. The animal must be suffering from the actions of the individual. Also, the individual must not be taking appropriate actions for the care of the animal.

- Do NOT assume someone else will report the case even though it may be a serious case of abuse or neglect.

- When notifying authorities be able to state what type of abuse or neglect is suspected and provide any other pertinent information.

- Do NOT confront the horse owner or caretaker yourself.

OBJECTIVE 20 **Evaluated on Assignment Sheet 3.**

CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) EQUINE MANAGEMENT AND PRODUCTION

UNIT NUMBER AND TITLE A2 – SAFETY

TOTAL NUMBER OF TEST QUESTIONS 83

TOTAL NUMBER OF BASIC SKILL QUESTIONS 27

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
1	1-5	S, W
2	1-6	W
3	1-14	X
4	1-9	W
5	1-3	X
6	1-4	X
7	Evaluated on AS 1	
8	1	W
9	1-15	X
10	1-15	X
11	1	W
12	1	W
13	Evaluated on the JS	
14	1	W
15	1	W
16	1-5	X
17	1	W

CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) EQUINE MANAGEMENT AND PRODUCTION

UNIT NUMBER AND TITLE A2 – SAFETY

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
18	Evaluated on AS 2	
19	1	W, U
20	Evaluated on AS 3	

INSTRUCTOR'S GUIDE

HANDLING, GROOMING AND GENERAL CARE

A3

Required Activities and Resources (R)

These are fully integrated components of this CIMC curriculum. They are usually packaged in or with the curriculum and are essential in meeting the learning objectives. To individualize this unit, use the LAP Sheet supplied in your resources.

- Reproducible Handouts and Transparency Masters are included in the Instructor's Resource Package. Handouts should be copied for all students. Transparency Masters should be used to make overhead transparencies for using during instruction. A small copy of each Transparency Master appears in the student's Information Sheets.
- Non-reproducible resources are included in the student's curriculum.

Optional Activities and Resources (O)

These are suggested high-interest activities to help deliver learning objectives to students or to let students achieve objectives in an applied context. Select as many as you wish to use. Some activities use extra resources for further information about the unit content. You can make them available in the classroom for in-depth study or optional activities, but their use is not required for meeting CIMC unit objectives.

FOCUS ASSIGNMENTS

Prereading

R Have the students read the Handout *Every Horse*.

Writing

R Have the students write a short discussion of the responsibilities involved in caring for horses. Have them include a discussion of what could happen if these responsibilities were not carried out.

O Discuss the responsibilities involved in caring for horses in different situations. For example, a person who has several horses that are used for recreational riding and kept in a pasture.

GENERAL INSTRUCTIONS

Assignment Sheets

- R Review the directions and any specific guidelines.
- R Make certain that any needed materials from the Instructor's Resource Package are available.
- R Have the students complete the Assignment Sheet. Evaluate each student's performance and provide reteaching and retesting as necessary. Have the students repeat the Assignment Sheet until they achieve mastery.
- R Complete each student's Competency Profile.
- O Have the students volunteer to read aloud the directions and any special guidelines.
- O Return the completed Assignment Sheets to the students so that they may use them for later reference if needed.

Job Sheets

- R Review the introduction and evaluation criteria for the Job Sheet. Remind the students that they should not fill in the blanks in the Yes/No columns.
- R Review and explain all general guidelines, safety cautions, and warnings.
- R Make sure that all tools, equipment, and supplies are available.
- R Demonstrate each of the procedures outlined in the Job Sheet.
- R Allow the students to practice the Job Sheet skills before skills testing. Coach, correct, and supervise as necessary.
- R Have the students complete the Job Sheet. Evaluate each student's performance and provide remediation as necessary. Have the students repeat the Job Sheet until they achieve mastery.
- R Complete each student's Competency Profile.
- R Return the completed Job Sheets to the students so that they may use them for later reference if needed.
- O Have the students volunteer to read aloud the job guidelines, cautions, and warnings.

LAP Sheets

The LAP Sheets are an optional component that can be used to individualize instruction. The following instructions should be followed only if you are using the LAP Sheets.

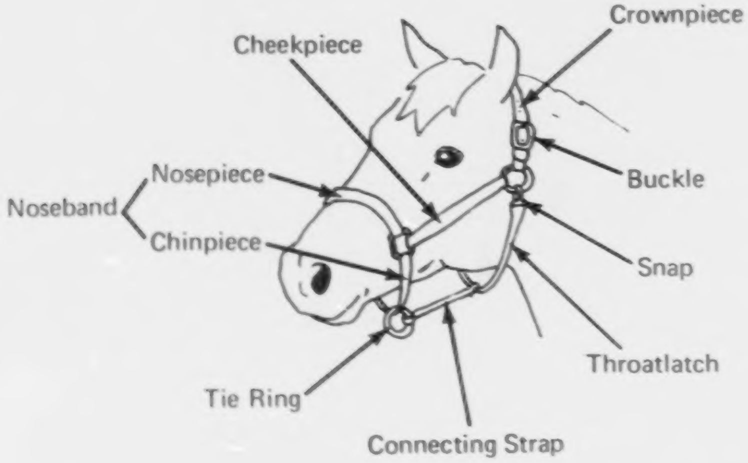
R Explain the specific procedures to be followed to the students before they begin using the LAP Sheet. Be sure that each student understands the procedures for using the LAP Sheet.

R If you want the student to complete any of the assignments on the LAP Sheet that are labeled optional, assign these to the student. Be sure to provide any needed resources.

OBJECTIVE 1

Identify parts of a halter.

R Display a halter and identify the parts for students. The parts of a halter are shown below. Circulate around the room and ensure that students write the correct information in the Information Sheet.



O Display and discuss different types of halters, such as leather, nylon, and rope halters.

OBJECTIVE 2

Describe the proper fit of the halter.

O Show students examples of properly and improperly fitted halters on horses.

OBJECTIVE 3

Halter a horse. (Job Sheet 1)

R See the general instructions for all Job Sheets.

OBJECTIVE 4

Label the sensitive areas of the horse.

O Identify the sensitive areas of the horse on an actual horse.

O Instructors may wish to cover the external parts of the horse when discussing sensitive areas. The external parts of the horse are covered in Unit B1 "Horse Health and Disease Prevention."

OBJECTIVE 5

List reasons for grooming the horse.

O Discuss the importance of grooming horses. Emphasize that grooming should be done thoroughly and carefully without rushing.

OBJECTIVE 6

Identify grooming equipment/aids/products.

R Collect the following grooming equipment/aids/products.

☐ animal clippers
☐ body brush
☐ cloth or rag
☐ coat conditioners
☐ dandy (stiff) brush
☐ fly spray
☐ hoof care products
☐ hoof pick/brush
☐ mane and tail comb
☐ rubber curry comb
☐ shampoo
☐ sweat scraper

R Display the equipment/aids/products for students. Have students name the items as you hold them up.

R Discuss each item as it is displayed. Ask the students to tell you what they know about each item and its use.

O Keep the display of items available for examination until the students are tested on them.

OBJECTIVE 7

Match grooming equipment/aid/products to their uses.

O Discuss the purpose of each grooming item.

OBJECTIVE 8

Select from a list safety factors to consider when physically approaching the horse during grooming.

O Emphasize the importance of safety when grooming. Demonstrate to students the correct way to approach a horse during grooming.

OBJECTIVE 9

Select from a list safety factors to consider when grooming.

O Discuss safety when grooming. Emphasize that safety must always be considered and that accidents and injuries can happen even with the gentlest horses.

OBJECTIVE 10

List the minimum daily care requirements of horses.

O Discuss the minimum daily care requirements of horses. Emphasize that before a person becomes a horse owner or caretaker they must be willing and able to fulfill these minimum requirements. Ask students what could happen to the horse if these requirements were not met.

OBJECTIVE 11

Groom a horse. (Job Sheet 2)

R See the general instructions for all Job Sheets.

O Discuss that horses will be groomed differently according to the purpose of the grooming and the use of the horse.

O Show students the procedures for pulling a mane and braiding a mane.

OBJECTIVE 12

Wash a horse. (Job Sheet 3)

R See the general instructions for all Job Sheets.

EVALUATION

Pretest

- Use the unit Written Test for *both* the pretest and posttest. Give the students the pretest before they begin the unit.

- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving pretests and using the results. Information for ordering this material is included in the optional resources section.

- Use pretest results to guide individual students in progressing through the unit, doing enrichment work, or moving to the next unit.

Focus Assignment

- Use an informal evaluation of the focus assignments as a diagnostic tool for determining if any students need extra help in reading comprehension or writing skills. Refer these students to their English instructor, Learning Resource Center, or Educational Enhancement Center.

Assignment Sheet

- Evaluate students on Assignment Sheet activities. Students must repeat an Assignment Sheet until they have mastered the activity.

- Complete each student's Competency Profile.

Skill Test

- Explain to the students that they will be asked to demonstrate the procedures on the Job Sheets as a skills test.

- Describe the rating scale used on the skills test.

- Reteach and retest as necessary.

- Complete each student's Competency Profile.

Posttest

- After they have completed the unit, give students the Written Test again.

- Explain to the students that they will be asked to demonstrate on the Written Test actions listed in the specific objectives.

- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving posttests and using the results. Information for ordering this material is included in the optional resources section.
- Reteach and retest as necessary to meet individual student needs and state standards for student learning and competency gains.
- Complete the appropriate sections of the Competency Profiles.
- Review individual and group performance to evaluate teaching effectiveness. Adjust scope, sequence, or instructional methods for additional lessons as required.

REQUIRED RESOURCES

The items marked with an asterisk are included in the Instructor's Resource Package.

Publications

- *Every Horse.* Handout.*

OPTIONAL RESOURCES

Publications

- Evans, J. Warren. *Horses: A Guide to Selection, Care, and Enjoyment*, (2nd ed.). New York: W.H. Freeman and Company, 1989.
- Hawcroft, Tim. *The Complete Book of Horse Care.* New York: Howell Book House, 1992.
- *Measuring Learning and Competency Gains: The Pretest/Posttest Approach.* Stillwater, OK: CIMC, Oklahoma Department of Vocational and Technical Education, 1992. For ordering information call 800-522-5810.

Videos

- *Basic Horse Care.* Humble, TX: Horseman's Video Showcase, 1986.
- *A Little Horse Sense: Basic Horse Care and Grooming.* Pasadena, CA: A Little Horse Sense Videos, 1991.

UNIT REFERENCES

Publications

- *Equine Science.* College Station, TX: Instructional Materials Service, Texas A&M University, 1990.
- Evans, J. Warren. *Horses: A Guide to Selection, Care, and Enjoyment,* (2nd ed.). New York: W.H. Freeman and Company, 1989.
- Hawcroft, Tim. *The Complete Book of Horse Care.* New York: Howell Book House, 1992.
- Mettler, John J. *Horse Sense: A Complete Guide to Horse Selection and Care.* The Alpine Press, 1989.

Videos

- *Basic Horse Care.* Humble, TX: Horseman's Video Showcase, 1986.
- *A Little Horse Sense: Basic Horse Care and Grooming.* Pasadena, CA: A Little Horse Sense Videos, 1991.

WRITTEN TEST

OBJECTIVE 1

A. Chinpiece
B. Nosepiece
C. Noseband
D. Cheekpiece
E. Crownpiece
F. Buckle
G. Snap
H. Throatlatch
I. Connecting Strap
J. Tie Ring

OBJECTIVE 2

Answer should include the following points.

- The halter should be snug without causing the horse discomfort.
- The halter should be appropriate for the situation.
- The throatlatch should rest just above the prominence of the jaw and the noseband should sit at the right height across the bridge of the nose.
- Do NOT allow the throatlatch to hang down below the prominence of the jaw.
- Do NOT have the halter so tight that the throatlatch pinches the horse.
- The halter should NOT rub against the horse's jawbone or cheekbones.

OBJECTIVE 3

Evaluated on Job Sheet 1.

OBJECTIVE 4

A. Areas That Have Bones Near Surface
B. Mouth
C. Areas That Have Bones Near Surface
D. Loin
E. Flank
F. Areas That Have Bones Near Surface

OBJECTIVE 5

Answers should include the following in any order:

- Removes dirt from horse's hair
- Stimulates skin
- Aids in circulation
- Gives the horse a more attractive appearance
- Guards against skin disorders
- Establishes rapport between the horse and the groomer

OBJECTIVE 6

Items should be listed in the order in which they were displayed.

OBJECTIVE 7

1. R
2. G
3. I
4. A
5. K
6. N
7. L
8. O
9. C
10. J
11. H
12. D

OBJECTIVE 8

1, 3, 5, 6

OBJECTIVE 9

1, 2, 5, 7, 8, 9, 11, 12, 14, 15

OBJECTIVE 10	Answer should include the following information in any order. Students may choose to expand on the information. • Feeding • Watering • Cleaning the stall/paddock • Grooming • Hoof care • Exercise • Checked for signs of injury/illness
OBJECTIVE 11	**Evaluated on Job Sheet 2.**
OBJECTIVE 12	**Evaluated on Job Sheet 3.**

Page 1 of 1

CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) EQUINE MANAGEMENT AND PRODUCTION

UNIT NUMBER AND TITLE A3 – HANDLING, GROOMING AND GENERAL CARE

TOTAL NUMBER OF TEST QUESTIONS 75

TOTAL NUMBER OF BASIC SKILL QUESTIONS 1

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
1	A-J	X
2	1	W
3	Evaluated on JS 1	
4	A-F	X
5	1-6	X
6	1-12	X
7	1-12	X
8	1-6	X
9	1-15	X
10	1-7	X
11	Evaluated on JS 2	
12	Evaluated on JS 3	

INSTRUCTOR'S GUIDE

HANDLING THE YOUNG, UNBROKEN HORSE

A4

Required Activities and Resources (R)

These are fully integrated components of this CIMC curriculum. They are usually packaged in or with the curriculum and are essential in meeting the learning objectives. To individualize this unit, use the LAP Sheet supplied in your resources.

- Reproducible Handouts and Transparency Masters are included in the Instructor's Resource Package. Handouts should be copied for all students. Transparency Masters should be used to make overhead transparencies for using during instruction. A small copy of each Transparency Master appears in the student's Information Sheets.
- Non-reproducible resources are included in the student's curriculum.

Optional Activities and Resources (O)

These are suggested high-interest activities to help deliver learning objectives to students or to let students achieve objectives in an applied context. Select as many as you wish to use. Some activities use extra resources for further information about the unit content. You can make them available in the classroom for in-depth study or optional activities, but their use is not required for meeting CIMC unit objectives.

FOCUS ASSIGNMENTS

Prereading

R Have students read the Handout *It Takes Time.*

Writing

R Have students write a short (one paragraph) discussion on the work involved in handling the young, unbroken horse.

GENERAL INSTRUCTIONS

Assignment Sheets

R Review the directions and any specific guidelines.

R Make certain that any needed materials from the Instructor's Resource Package are available.

R Have the students complete the Assignment Sheet. Evaluate each student's performance and provide reteaching and retesting as necessary. Have the students repeat the Assignment Sheet until they achieve mastery.

R Complete each student's Competency Profile.

O Have the students volunteer to read aloud the directions and any special guidelines.

O Return the completed Assignment Sheets to the students so that they may use them for later reference if needed.

Job Sheets

R Review the Introduction and Evaluation Criteria for the Job Sheet. Remind the students that they should not fill in the blanks in the Yes/No columns.

R Review and explain all general guidelines, safety cautions, and warnings.

R Make sure that all tools, equipment, and supplies are available.

R Demonstrate each of the procedures outlined in the Job Sheet.

R Allow the students to practice the Job Sheet skills before skills testing. Coach, correct, and supervise as necessary.

R Have the students complete the Job Sheets. Evaluate each student's performance and provide remediation as necessary. Have the students repeat the Job Sheet until they achieve mastery.

R Complete each student's Competency Profile.

R Return the completed Job Sheet to the students so that they may use them for later reference if needed.

O Have the students volunteer to read aloud the job guidelines, cautions, and warnings.

LAP Sheets

The LAP Sheets are an optional component that can be used to individualize instruction. The following instructions should be followed only if you are using the LAP Sheets.

R Explain the specific procedures to be followed to the students before they begin using the LAP Sheet. Be sure that each student understands the procedures for using the LAP Sheet.

R If you want the student to complete any of the assignments on the LAP Sheet that are labeled optional, assign these to the student. Be sure to provide any needed resources.

OBJECTIVE 1 **Match the stages of learning in a horse's training to the correct descriptions.**

O Discuss the stages in learning in a horse's training. Emphasize that poor training techniques early in a horse's life will affect the horse's ability to respond effectively to later training.

OBJECTIVE 2 **List factors to consider in training the young horse.**

O Discuss factors to consider in training the young horse. Have students write up a short summary of a plan to train the young horse.

OBJECTIVE 3 **Select from a list factors to consider when physically approaching the young horse.**

O Discuss approaching the young horse. Emphasize that safety must always be followed and young horses are capable of injuring either themselves or their handler.

O Demonstrate to students the correct way to approach a young horse.

OBJECTIVE 4 **Discuss the uses of voice aids with young horses.**

O State that voice is an important tool in handling young, unbroken horses. Emphasize that negative voice aids such as yelling are not helpful and may frighten the horse.

OBJECTIVE 5

Describe the use of restraint in handling the young, unbroken horse.

O Show the video *Safe Handling of Foals and Yearlings.*

OBJECTIVE 6

Halter break a foal. (Job Sheet 1)

R See the general instructions for all Job Sheets.

R Emphasize that halter breaking a foal takes time. It is not something done in one session. The procedure shown is only one method of halter breaking, there are other methods of halter breaking.

R Stress that the session should not be long (15 minutes) and that the foal should not be subject to any kind of harsh treatment.

O Show the video *Safe Handling of Foals and Yearlings.*

OBJECTIVE 7

Halter break a weanling. (Job Sheet 2)

R See the general instructions for all Job Sheets.

R Emphasize that halter breaking a weanling takes time, especially if the weanling has not been handled much. The procedure shown is only one method of halter breaking, there are other methods of halter breaking.

O Show the video *Safe Handling of Foals and Yearlings.*

O Show the video *Leading and Loading.*

OBJECTIVE 8

Teach a horse to longe. (Job Sheet 3)

R See the general instructions for all Job Sheets.

R Emphasize that teaching a horse to longe takes time. The horse should start in short sessions and gradually work up to longer sessions.

EVALUATION

Pretest

- Use the unit Written Test for *both* the pretest and posttest. Give the students the pretest before they begin the unit.
- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving pretests and using the results. Information for ordering this material is included in the optional resources section.
- Use prestest results to guide individual students in progressing through the unit, doing enrichment work, or moving to the next unit.

Focus Assignment

- Use an informal evaluation of the focus assignments as a diagnostic tool for determining if any students need extra help in reading comprehension or writing skills. Refer these students to their English instructor, Learning Resource Center, or Educational Enhancement Center.

Assignment Sheet

- Evaluate students on Assignment Sheet activities. Students must repeat an Assignment Sheet until they have mastered the activity.
- Complete each student's Competency Profile.

Skill Test

- Explain to the students that they will be asked to demonstrate the procedures on the Job Sheets as a skills test.
- Describe the rating scale used on the skills test.
- Reteach and retest as necessary.
- Complete each student's Competency Profile.

Posttest

- After they have completed the unit, give students the Written Test again.

- Explain to the students that they will be asked to demonstrate on the Written Test actions listed in the specific objectives.

- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving posttests and using the results. Information for ordering this material is included in the optional resources section.

- Reteach and retest as necessary to meet individual student needs and state standards for student learning and competency gains.

- Complete the appropriate sections of the Competency Profiles.

- Review individual and group performance to evaluate teaching effectiveness. Adjust scope, sequence, or instructional methods for additional lessons as required.

REQUIRED RESOURCES

The items marked with an asterisk are included in the Instructor's Resource Package.

Publications

- *It Takes Time.* Handout.*

OPTIONAL RESOURCES

Publications

- Hill, Cherry. *The Formative Years.* Millwood, NY: Breakthrough Publications, Inc., 1988.

- *Measuring Learning and Competency Gains: The Pretest/Posttest Approach.* Stillwater, OK: CIMC, Oklahoma Department of Vocational and Technical Education, 1992. For ordering information call 800-522-5810.

Videos

- *Leading and Loading.* The John Lyons series. Humble, TX: Horseman's Video Showcase, 1989.

- *Safe Handling of Foals and Yearlings.* Santa Monica, CA: Equestrian Video Library, 1986.

UNIT REFERENCES

Publications

- Evans, J. Warren. *Horses: A Guide to Selection, Care, and Enjoyment.* New York: W.H. Freeman and Company, 1989.
- Hawcroft, Tim. *The Complete Book of Horse Care.* New York: Howell Book House, 1992.
- Hill, Cherry. *The Formative Years.* Millwood, NY: Breakthrough Publications, Inc., 1988.

Videos

- *Safe Handling of Foals and Yearlings.* Santa Monica, CA: Equestrian Video Library, 1986.

WRITTEN TEST

OBJECTIVE 1

1. D
2. H
3. G
4. C
5. A
6. E

OBJECTIVE 2

Answer should include the following in any order:

- Develop a definite plan.
- Be consistent in the use of training aids and cues used by the trainer.
- Do not expect the horse to progress too rapidly.
- Do not demand excessive work from a young horse.

OBJECTIVE 3

2, 4, 5, 7, 8, 10

OBJECTIVE 4

Answer should include the following points:

- The tone of voice is most important; a soothing tone of voice will have a calming effect on a horse.
- Individual words of command can be taught if the same tone of voice is used with each command.
- The voice should be used to reward or correct young horses.
- Whether voice or physical discipline is used, the punishment as well as the reward should fit the behavior.

- The voice should be used when other types of communication aids are not suitable.
- Be consistent; develop a trust with the horse.

OBJECTIVE 5

Answer should include the following points:

- Suckling foals can be restrained by cradling the foal gently in your arms.
- Foals can be restrained by holding under the neck and grasping their tail and bringing it up over the croup if more restraint is needed.
- Foals should be halter broken and taught to stand tied.
- Foals can be restrained in the stocks if necessary to treat or medicate them.
- Accustom foals to restraint methods gradually, do not use any more restraint than is necessary.
- Remember safety factors.

OBJECTIVE 6 **Evaluated on Job Sheet 1.**

OBJECTIVE 7 **Evaluated on Job Sheet 2.**

OBJECTIVE 8 **Evaluated on Job Sheet 3.**

CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) EQUINE MANAGEMENT AND PRODUCTION

UNIT NUMBER AND TITLE A4 – HANDLING THE YOUNG, UNBROKEN HORSE

TOTAL NUMBER OF TEST QUESTIONS 22

TOTAL NUMBER OF BASIC SKILL QUESTIONS 2

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
1	1-6	X
2	1-4	X
3	1-10	X
4	1	W
5	1	W
6	Evaluated on JS 1	
7	Evaluated on JS 2	
8	Evaluated on JS 3	

INSTRUCTOR'S GUIDE

HORSE HEALTH AND DISEASE PREVENTION

B1

Required Activities and Resources (R)

These are fully integrated components of this CIMC curriculum. They are usually packaged in or with the curriculum and are essential in meeting the learning objectives. To individualize this unit, use the LAP Sheet supplied in your resources.

- Reproducible Handouts and Transparency Masters are included in the Instructor's Resource Package. Handouts should be copied for all students. Transparency Masters should be used to make overhead transparencies for use during instruction. A small copy of each Transparency Master appears in the student's Information Sheets.
- Non-reproducible resources are included in the student's curriculum.

Optional Activities and Resources (O)

These are suggested high-interest activities to help deliver learning objectives to students or to let students achieve objectives in an applied context. Select as many as you wish to use. Some activities use extra resources for further information about unit content. You can make them available in the classroom for in-depth study or optional activities, but their use is not required for meeting CIMC unit objectives.

FOCUS ASSIGNMENTS

Prereading

R Have the students read the Handout *A Lot to Know.*

Writing

R Have the students write a short discussion on the importance of knowing about horse health and disease prevention.

GENERAL INSTRUCTIONS

Assignment Sheets

R Review the directions and any specific guidelines.

R Make certain that any needed materials from the Instructor's Resource Package are available.

R Have the students complete the Assignment Sheet. Evaluate each student's performance and provide reteaching and retesting as necessary. Have the students repeat the Assignment Sheet until they achieve mastery.

R Complete each student's Competency Profile.

O Have the students volunteer to read aloud the directions and any special guidelines.

O Return the completed Assignment Sheets to the students so that they may use them for later reference if needed.

Job Sheets

R Review the introduction and evaluation criteria for the Job Sheet. Remind the students that they should not fill in the blanks in the Yes/No columns.

R Review and explain all general guidelines, safety cautions, and warnings.

R Make sure that all tools, equipment, and supplies are available.

R Demonstrate each of the procedures outlined in the Job Sheet.

R Allow the students to practice the Job Sheet skills before skills testing. Coach, correct, and supervise as necessary.

R Have the students complete the Job Sheet. Evaluate each student's performance and provide remediation as necessary. Have the students repeat the Job Sheet until they achieve mastery.

R Complete each student's Competency Profile.

R Return the completed Job Sheets to the students so that they may use them for later reference if needed.

O Have the students volunteer to read aloud the job guidelines, cautions, and warnings.

LAP Sheets

The LAP Sheets are an optional component that can be used to individualize instruction. The following instructions should be followed only if you are using the LAP Sheets.

R Explain the specific procedures to be followed to the students before they begin using the LAP Sheet. Be sure that each student understands the procedures for using the LAP Sheet.

R If you want the student to complete any of the assignments on the LAP Sheet that are labeled optional, assign these to the student. Be sure to provide any needed resources.

OBJECTIVE 1

Identify the parts of the horse.

R Use Transparency Master 1 to illustrate the parts of the horse. Circulate around the room to ensure students write the correct information in their Information Sheet.

OBJECTIVE 2

Label the parts of the skeletal system.

R Use Transparency Master 2 to illustrate the parts of the skeletal system. Circulate around the room to ensure students write the correct information in their Information Sheet.

OBJECTIVE 3

Label the major parts of the muscular system.

R Use Transparency Master 3 to illustrate the parts of the muscular system. Circulate around the room to ensure students write the correct information in their Information Sheet.

OBJECTIVE 4

Label the parts of the circulatory system.

R Use Transparency Master 4 to illustrate the parts of the circulatory system. Circulate around the room to ensure students write the correct information in their Information Sheet.

OBJECTIVE 5

Select from a list functions of the circulatory system.

O Refer to *Horse Owner's Veterinary Handbook* for further information.

OBJECTIVE 6

Label the parts of the respiratory system.

R Use Transparency Master 5 to illustrate the parts of the respiratory system. Circulate around the room to ensure students write the correct information in their Information Sheet.

OBJECTIVE 7

List functions of the respiratory system.

O Refer to *Horse Owner's Veterinary Handbook* for further information.

OBJECTIVE 8

Label the parts of the nervous system.

R Use Transparency Master 6 to illustrate the parts of the nervous system. Circulate around the room to ensure students write the correct information in their Information Sheet.

OBJECTIVE 9

Match parts of the nervous system to their functions.

O Refer to *Horse Owner's Veterinary Handbook* for further information.

OBJECTIVE 10

Label the parts of the digestive system.

R Use Transparency Master 7 to illustrate the parts of the digestive system. Circulate around the room to ensure students write the correct information in their Information Sheet.

OBJECTIVE 11

Match parts of the digestive system to their descriptions.

O Refer to *Horse Owner's Veterinary Handbook* or *Feeding to Win II* for further information.

OBJECTIVE 12

Label the parts of the reproductive system of the mare.

R Use Transparency Master 8 to illustrate the parts of the reproductive system of the mare. Circulate around the room to ensure students write the correct information in their Information Sheet.

OBJECTIVE 13

Match parts of the mare reproductive system to their functions.

- O Refer to *Horse Owner's Veterinary Handbook* or *Breeding Management and Foal Development* for further information.

OBJECTIVE 14

Label the parts of the reproductive system of the stallion.

- R Use Transparency Master 9 to illustrate the parts of the reproductive system of the stallion. Circulate around the room to ensure students write the correct information in their Information Sheet.

OBJECTIVE 15

Match parts of the stallion reproductive system to their functions.

- O Refer to *Horse Owner's Veterinary Handbook* or *Breeding Management and Foal Development* for further information.

OBJECTIVE 16

Describe the endocrine system.

- O Discuss the endocrine system. Emphasize that the endocrine system helps regulate many body functions.

OBJECTIVE 17

List characteristics of a healthy horse.

- O Refer to *Horse Owner's Veterinary Handbook* for further information.
- O Show students a healthy horse and point out the characteristics of a healthy horse.
- O Discuss the characteristics of a healthy horse. Indications to look for are vital signs, capillary refill, bowel sounds, and hydration.

OBJECTIVE 18

List the vital signs and their normal ranges.

- O Discuss the vital signs and their normal ranges. Emphasize that these ranges may vary for foals and younger horses. Refer to resources listed under optional resources for further information.
- O Show the appropriate sections from the video *When Should I Call the Vet, Part I.*

- O Discuss with students that horse owners and caretakers should also be able to check capillary refill, the color of the mucous membranes, gut sounds, and skin hydration. Demonstrate to students how to observe these items.

- O Explain that it is very important that horse owners and caretakers by able to tell a veterinarian the specific parameters of these items (including vital signs). Knowing how to observe a horse for possible indications of illness is a basic part of horse care.

OBJECTIVE 19

Check the vital signs. (Job Sheet)

- R See the general instructions for all Job Sheets.

- O Demonstrate to students how to check for capillary refill, the color of mucous membranes, gut sounds, and skin hydration. Have students practice the procedures.

OBJECTIVE 20

Select from a list components essential for maintaining an effective health care program.

- O Refer to *Horse Owner's Veterinary Handbook* for further information.

OBJECTIVE 21

List diseases which may be prevented by immunization.

- O Refer to *Horse Owner's Veterinary Handbook* for further information.

- O Obtain OSU Extension Fact No. 9119 *Equine Vaccination Programs* and make it available for students to read.

OBJECTIVE 22

Describe treatment of a new horse that has just been purchased or brought on the farm/ranch.

- O Discuss treatment of a new horse that has just been purchased. Emphasize that some precautions should be taken.

OBJECTIVE 23

Complete a chart on infectious diseases.

- O Refer to *Horse Owner's Veterinary Handbook* for further information.

OBJECTIVE 24

List means by which infectious diseases are passed from one horse to another.

O Refer to *Horse Owner's Veterinary Handbook* for further information.

OBJECTIVE 25

Complete a chart on noninfectious diseases.

O Refer to *Horse Owner's Veterinary Handbook* for further information.

OBJECTIVE 26

Select from a list items to be recorded in case history.

O Refer to *Horse Owner's Veterinary Handbook* for further information.

O Ask students if there is other information they would like to keep a record of on a horse if they were the owner or caretaker.

OBJECTIVE 27

Complete record forms on horse health. (Assignment Sheet)

R See the general instructions for all Assignment Sheets.

EVALUATION

Pretest

- Use the unit Written Test for *both* the pretest and posttest. Give the students the pretest before they begin the unit.
- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving pretests and using the results. Information for ordering this material is included in the optional resources section.
- Use pretest results to guide individual students in progressing through the unit, doing enrichment work, or moving to the next unit.

Focus Assignment

- Use an informal evaluation of the focus assignments as a diagnostic tool for determining if any students need extra help in reading comprehension or writing skills. Refer these students to their English instructor, Learning Resource Center, or Educational Enhancement Center.

Assignment Sheet

- Evaluate students on Assignment Sheet activities. Students must repeat an Assignment Sheet until they have mastered the activity.

- Complete each student's Competency Profile.

Skill Test

- Explain to the students that they will be asked to demonstrate the procedures on the Job Sheets as a skills test.

- Describe the rating scale used on the skills test.

- Reteach and retest as necessary.

- Complete each student's Competency Profile.

Posttest

- After they have completed the unit, give students the Written Test again.

- Explain to the students that they will be asked to demonstrate on the Written Test actions listed in the specific objectives.

- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving posttests and using the results. Information for ordering this material is included in the optional resources section.

- Reteach and retest as necessary to meet individual student needs and state standards for student learning and competency gains.

- Complete the appropriate sections of the Competency Profiles.

- Review individual and group performance to evaluate teaching effectiveness. Adjust scope, sequence, or instructional methods for additional lessons as required.

REQUIRED RESOURCES

The items marked with an asterisk are included in the Instructor's Resource Package.

Publications

- *A Lot to Know.* Handout.*

OPTIONAL RESOURCES

Publications

- *Breeding Management and Foal Development.* Tyler, Texas: Equine Research, Inc., 1982.
- Evans, J. Warren. *Horses: A Guide to Selection, Care, and Enjoyment, (2nd ed.).* New York: W.H. Freeman and Company, 1989.
- Giffin, James M. and Tom Gore. *Horse Owner's Veterinary Handbook.* New York: Howell Book House, 1989.
- *Measuring Learning and Competency Gains: The Pretest/Posttest Approach.* Stillwater, OK: CIMC, Oklahoma Department of Vocational and Technical Education, 1992. For ordering information call 800-522-5810.
- OSU Extension Facts No. 9119 *Equine Vaccination Programs.* Stillwater, OK: Oklahoma State University Cooperative Extension Service.

  ☑ **NOTE:** For information on obtaining this fact sheet contact your local Oklahoma County Extension office.

Videos

- *When Should I Call the Vet, Part I.* La Jolla, CA: Lawlor Productions, 1988.

UNIT REFERENCES

Publications

- *Breeding Management and Foal Development.* Tyler, Texas: Equine Research, Inc., 1982.
- Evans, J. Warren. *Horses: A Guide to Selection, Care, and Enjoyment, (2nd ed.).* New York: W.H. Freeman and Company, 1989.
- Giffin, James M. and Tom Gore. *Horse Owner's Veterinary Handbook.* New York: Howell Book House, 1989.
- OSU Extension Facts No. 9119 *Equine Vaccination Programs.* Stillwater, OK: Oklahoma State University Cooperative Extension Service.

Videos

- *When Should I Call the Vet, Part I.* La Jolla, CA: Lawlor Productions, 1988.

ASSIGNMENT SHEETS

OBJECTIVE 27

Assignment Sheet 1

Students should have completed the horse health forms. Marks on the forms should be legible and understandable.

WRITTEN TEST

OBJECTIVE 1

A. Ear
B. Mane
C. Withers
D. Back
E. Loin
F. Croup
G. Tail
H. Buttock
I. Flank
J. Quarter
K. Stifle
L. Gaskin
M. Hock
N. Cannon
O. Ankle
P. Fetlock
Q. Hoof or Foot
R. Pastern
S. Abdomen
T. Thigh
U. Point of Hip
V. Coupling
W. Barrel
X. Girth
Y. Fetlock
Z. Coronet

AA. Pastern
BB. Ankle
CC. Cannon
DD. Knee
EE. Forearm
FF. Elbow
GG. Arm
HH. Chest
II. Point of Shoulder
JJ. Throatlatch
KK. Jaw
LL. Cheek
MM. Under Lip
NN. Lower Lip
OO. Upper Lip
PP. Muzzle
QQ. Nostril
RR. Bridge of Nose
SS. Face
TT. Forehead
UU. Poll
VV. Crest
WW. Neck
XX. Shoulder

OBJECTIVE 2

A. Skull
B. Mandible
C. Scapula or Shoulder Bone
D. Shoulder Joint
E. Sternum
F. Humerus or Arm Bone
G. Radius and Ulna
H. Carpal or Knee Bones
I. Small Metacarpal or Splint Bone
J. Large Metacarpal or Cannon
K. Sesamoid
L. 3rd Phalanx
M. 2nd Phalanx
N. 1st Phalanx
O. Cannon Bone
P. Tarsal or Hock Bone
Q. Tibia and Fibula or Leg Bones
R. Pelvis
S. Ribs
T. Elbow
U. Spinous Process
V. Point of Hip
W. Point of Croup
X. Hip Joint
Y. Ischium
Z. Femur or Thigh
AA. Stifle Joint
BB. Tarsus or Hock
CC. Large Metatarsal or Cannon
DD. Sesamoid

OBJECTIVE 3

A. Trapezius
B. Deltoid
C. Pectorals, superficial
D. Latissimus dorsi
E. Triceps brachii
F. Semitendinosus

OBJECTIVE 4

A. Common Carotid Artery
B. Jugular Vein
C. Subclavian Artery
D. Cephalic Vein
E. Median Artery
F. Thoracic Artery
G. Pulmonary Artery
H. Mesenteric Artery
I. Femoral Artery
J. Aorta
K. Hepatic Vein
L. Portal Vein
M. Renal Artery

OBJECTIVE 5

1, 3, 4, 5, 7, 9, 10, 11, 12

OBJECTIVE 6

A. Nasal Passages
B. Pharynx
C. Larynx
D. Epiglottis
E. Trachea
F. Bronchi
G. Diaphragm
H. Lungs

OBJECTIVE 7

Answer should include the following:

- Draws air into the lungs
- Aids the circulatory system by inhaling oxygen and exhaling carbon dioxide
- Aids in body temperature regulations, elimination of water, and making sounds

OBJECTIVE 8

A. Spinal Cord
B. Vertebrae
C. Lumbo-sacral Plexus
D. Spinal Cord
E. Cerebellum
F. Brain
G. Cerebrum
H. Cranial Nerves
I. Medulla Oblongata
J. Sympathetic Nerves
K. Parasympathetic Nerves
L. Brachial Plexus

OBJECTIVE 9

1. H
2. A
3. D
4. E
5. B
6. I
7. G
8. K
9. J

OBJECTIVE 10

A. Cavity of Mouth
B. Esophagus
C. Cecum
D. Large Colon
E. Small Intestine
F. Anus
G. Rectum
H. Small Colon
I. Stomach
J. Pharynx

OBJECTIVE 11

1. A
2. L
3. B
4. C
5. F
6. E
7. H
8. J
9. I

OBJECTIVE 12

A. Kidney
B. Ovary
C. Fallopian Tube
D. Infundibulum
E. Uterine Horn (left)
F. Uterine Horn (right)
G. Body of Uterus
H. Bladder
I. Vulva
J. Labia
K. Vagina
L. Anus
M. Rectum
N. Cervix
O. Sacral Vertebra
P. Pelvis
Q. Lumbar Vertebra

OBJECTIVE 13

1. A
2. B
3. D
4. G
5. E

OBJECTIVE 14

A. Ampulla
B. Vas Deferens
C. Spermatic Cord
D. Glans Penis
E. Prepuce
F. Body of the Penis
G. Scrotum
H. Left Testis
I. Epididymis
J. Bulbourethral Gland
K. Prostate Gland
L. Left Seminal Vesicle

OBJECTIVE 15

1. B
2. D
3. E
4. F
5. G
6. H
7. A

OBJECTIVE 16

Answer should include the following points:

- The endocrine system is comprised of a system of ductless glands that influence the following actions:
    - events surrounding conception
    - gestation
    - parturition
    - digestion
    - metabolism
    - growth
    - puberty
    - aging
    - other physiological functions
- Hormones are secreted directly into the vascular system. Some hormones affect all body tissues while other hormones affect one organ or gland.
- Glands that are considered to be endocrine include the following:
    - pituitary
    - thyroid
    - parathyroid
    - pancreas
    - adrenal
    - gonads
    - placenta
    - pineal
    - thymus

- **Endocrine glands produce hormones which stimulate actions in the body.**
- **Endocrinology is still being researched and many aspects of endocrinology are not yet known.**

OBJECTIVE 17

Answer should include the following:

- Contentment
- Bright eyes and alert ears
- Good appetite
- Pliable skin and shiny coat
- Mucous membranes of eyes and lips pink colored and moist
- Normal temperature, pulse, and respiration
- No visible wounds
- Normal feces and urine

OBJECTIVE 18

Answer should include the following:

- Heart rate (pulse) - between 28-48 beats/min.
- Respiration - 6-24 breathes/min.
- Temperature - 99.0 - 100.5 degrees Fahrenheit

OBJECTIVE 19

Evaluated on the Job Sheet.

OBJECTIVE 20

1, 2, 4, 5, 6, 8, 9, 10, 12, 13, 15

OBJECTIVE 21

Answer should include the following:

- Strangles (Bacterial-Strep infection)
- Tetanus
- Influenza (Virus)
- Encephalomyelitis (eastern, western, and Venezuelan equine encephalomyelitis)
- Rhinopneumonitis (Virus)
- Rabies (Virus)
- Potomac horse fever

OBJECTIVE 22

Answer should include the following:

- Require negative equine infectious anemia exam (Coggins test)
- Check health records
- Immunize for diseases not currently covered
- Isolate for period of three weeks
- Deworm if not recently done

OBJECTIVE 23

1. Vaccination
2. Vaccination in anthrax endemic areas
3. Vaccination
4. No treatment
5. Fever, respiratory problems
6. No treatment
7. Vaccination
8. Proper hygiene, vaccination
9. Proper nursing care
10. Vaccination
11. High fever, diarrhea, loss of appetite, apathy, laminitis

OBJECTIVE 24

Answer should include the following:

- Feed containers
- Water containers
- Hypodermic needles
- Close contact
- Airborne

OBJECTIVE 25

1. Parasite control, proper feeding management
2. Lameness, heat in hoof, rotation of the coffin bone
3. Stiffness, dark colored urine, anxiety, sweating; tying up syndrome is less severe
4. Noise (whistling sound) during exercise; performs poorly
5. Airway obstruction

OBJECTIVE 26

1, 3, 4, 5, 7, 8, 10, 11, 12, 13

OBJECTIVE 27

Evaluated on the Assignment Sheet.

CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) EQUINE MANAGEMENT AND PRODUCTION

UNIT NUMBER AND TITLE B1 – HORSE HEALTH AND DISEASE PREVENTION

TOTAL NUMBER OF TEST QUESTIONS 268

TOTAL NUMBER OF BASIC SKILL QUESTIONS 185

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
1	A-XX	X
2	A-DD	S
3	A-F	S
4	A-M	S
5	1-13	S
6	A-H	S
7	1-3	S
8	A-L	S
9	1-9	S
10	A-J	S
11	1-9	S
12	A-Q	S
13	1-5	S
14	A-L	S
15	1-7	S
16	1	S, W
17	1-8	X

CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) EQUINE MANAGEMENT AND PRODUCTION

UNIT NUMBER AND TITLE B1 – HORSE HEALTH AND DISEASE PREVENTION

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
18	**1**	**S, W**
19	**Evaluated on JS**	
20	**1-15**	**X**
21	**1-7**	**S**
22	**1**	**W**
23	**1-11**	**S**
24	**1-5**	**S**
25	**1-5**	**S**
26	**1-13**	**X**
27	**Evaluated on the AS**	

INSTRUCTOR'S GUIDE

BASIC FIRST AID

B2

Required Activities and Resources (R)

These are fully integrated components of this CIMC curriculum. They are usually packaged in or with the curriculum and are essential in meeting the learning objectives. To individualize this unit, use the LAP Sheet supplied in your resources.

- Reproducible Handouts and Transparency Masters are included in the Instructor's Resource Package. Handouts should be copied for all students. Transparency Masters should be used to make overhead transparencies for use during instruction. A small copy of each Transparency Master appears in the student's Information Sheets.
- Non-reproducible resources are included in the student's curriculum.

Optional Activities and Resources (O)

These are suggested high-interest activities to help deliver learning objectives to students or to let students achieve objectives in an applied context. Select as many as you wish to use. Some activities use extra resources for further information about unit content. You can make them available in the classroom for in-depth study or optional activities, but their use is not required for meeting CIMC unit objectives.

FOCUS ASSIGNMENTS

Prereading

R Have the students read the Handout *Would You Know What To Do.*

Writing

R Have the students write a short discussion of the actions the individuals took. Have the students include a brief discussion of whether they think the actions were correct or incorrect and how the injury/illness may have been prevented, if possible.

GENERAL INSTRUCTIONS

Assignment Sheets

R Review the directions and any specific guidelines.

R Make certain that any needed materials from the Instructor's Resource Package are available.

R Have the students complete the Assignment Sheet. Evaluate each student's performance and provide reteaching and retesting as necessary. Have the students repeat the Assignment Sheet until they achieve mastery.

R Complete each student's Competency Profile.

O Have the students volunteer to read aloud the directions and any special guidelines.

O Return the completed Assignment Sheets to the students so that they may use them for later reference if needed.

Job Sheets

R Review the introduction and evaluation criteria for the Job Sheet. Remind the students that they should not fill in the blanks in the Yes/No columns.

R Review and explain all general guidelines, safety cautions, and warnings.

R Make sure that all tools, equipment, and supplies are available.

R Demonstrate each of the procedures outlined in the Job Sheet.

R Allow the students to practice the Job Sheet skills before skills testing. Coach, correct, and supervise as necessary.

R Have the students complete the Job Sheet. Evaluate each student's performance and provide remediation as necessary. Have the students repeat the Job Sheet until they achieve mastery.

R Complete each student's Competency Profile.

R Return the completed Job Sheets to the students so that they may use them for later reference if needed.

O Have the students volunteer to read aloud the job guidelines, cautions, and warnings.

LAP Sheets

The LAP Sheets are an optional component that can be used to individualize instruction. The following instructions should be followed only if you are using the LAP Sheets.

R Explain the specific procedures to be followed to the students before they begin using the LAP Sheet. Be sure that each student understands the procedures for using the LAP Sheet.

R If you want the student to complete any of the assignments on the LAP Sheet that are labeled optional, assign these to the student. Be sure to provide any needed resources.

OBJECTIVE 1 **List items for the basic first aid kit.**

O Show students examples of items to include in a basic first aid kit.

O Discuss uses for the items in a first aid kit.

OBJECTIVE 2 **List visual symptoms of abnormal health.**

O Discuss visual symptoms of abnormal health. Stress the importance of observing horses for signs of abnormal health. State that depression is often the first sign that may be noticed.

OBJECTIVE 3 **Discuss suggestions for basic treatment of wounds.**

O Discuss suggestions for basic treatment of wounds. Emphasize that horse owners and caretakers must remain calm when a horse has been injured.

O Show the section on basic treatment of wounds from the video *When Should I Call the Vet, Part II.*

OBJECTIVE 4 **Select from a list basic usages of bandages.**

O Discuss basic usages of bandages. Show students examples of different bandaging materials.

OBJECTIVE 5

Apply medication and bandage. (Job Sheet 1)

R See the general instructions for all Job Sheets.

O Show the video *Bandaging Techniques for Horses.*

OBJECTIVE 6

List symptoms of colic.

O Discuss symptoms of colic. Stress that colic is a serious medical emergency and a veterinarian should be consulted.

O Show the section on colic from the video *When Should I Call the Vet, Part II.*

OBJECTIVE 7

Describe actions to take before the vet arrives to care for a horse with colic.

O Discuss actions to take before the vet arrives to care for a horse with colic.

O Show the section on colic from the video *When Should I Call the Vet, Part II.*

OBJECTIVE 8

Distinguish between critical and noncritical injuries and illnesses.

O Discuss critical and noncritical injuries and illnesses. Discuss why the injuries or illnesses are critical or noncritical.

O Give students examples or ask them for examples of injuries and illnesses that might happen to horses. Ask them whether they think the injuries or illnesses are critical and then check in an equine first aid book for information on the injury or illness.

OBJECTIVE 9

Discuss basic care procedures for a horse during time of injury or illness.

O Discuss basic care procedures for a horse and emphasize that maintaining sanitary conditions is vital in the healing process.

OBJECTIVE 10

Analyze critical and noncritical situations and explain appropriate actions to be taken. (Assignment Sheet 1)

R See the general instructions for all Assignment Sheets.

OBJECTIVE 11

Analyze case studies and select items from a first aid kit to use in emergency situations. (Assignment Sheet 2)

R See the general instructions for all Assignment Sheets.

OBJECTIVE 12

Label intramuscular and subcutaneous injection sites.

R Show the Transparency Master.

O Point out to students the injection sites on an actual horse.

OBJECTIVE 13

Fill a syringe. (Job Sheet 1)

R See the general instructions for all Job Sheets.

OBJECTIVE 14

Give an intramuscular injection. (Job Sheet 2)

R See the general instructions for all Job Sheets.

EVALUATION

Pretest

- Use the unit Written Test for *both* the pretest and posttest. Give the students the pretest before they begin the unit.
- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving pretests and using the results. Information for ordering this material is included in the optional resources section.
- Use pretest results to guide individual students in progressing through the unit, doing enrichment work, or moving to the next unit.

Focus Assignment

- Use an informal evaluation of the focus assignments as a diagnostic tool for determining if any students need extra help in reading comprehension or writing skills. Refer these students to their English instructor, Learning Resource Center, or Educational Enhancement Center.

Assignment Sheet

- Evaluate students on Assignment Sheet activities. Students must repeat an Assignment Sheet until they have mastered the activity.
- Complete each student's Competency Profile.

Skill Test

- Explain to the students that they will be asked to demonstrate the procedures on the Job Sheets as a skills test.
- Describe the rating scale used on the skills test.
- Reteach and retest as necessary.
- Complete each student's Competency Profile.

Posttest

- After they have completed the unit, give students the Written Test again.
- Explain to the students that they will be asked to demonstrate on the Written Test actions listed in the specific objectives.
- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving posttests and using the results. Information for ordering this material is included in the optional resources section.
- Reteach and retest as necessary to meet individual student needs and state standards for student learning and competency gains.

- Complete the appropriate sections of the Competency Profiles.
- Review individual and group performance to evaluate teaching effectiveness. Adjust scope, sequence, or instructional methods for additional lessons as required.

REQUIRED RESOURCES

The items marked with an asterisk are included in the Instructor's Resource Package.

Publications

- *Would You Know What to Do?* Handout.*

OPTIONAL RESOURCES

Publications

- Evans, J. Warren. *Horses: A Guide to Selection, Care, and Enjoyment, (2nd ed.).* New York: W.H. Freeman and Company, 1989.
- Giffin, James M. and Tom Gore. *Horse Owner's Veterinary Handbook.* New York: Howell Book House, 1989.
- Kellon, Eleanor. *Dr. Kellon's Guide to First Aid for Horses.* Ossining, New York: Breakthrough Publications, Inc., 1990.
- *Measuring Learning and Competency Gains: The Pretest/Posttest Approach.* Stillwater, OK: CIMC, Oklahoma Department of Vocational and Technical Education, 1992. For ordering information call 800-522-5810.

Videos

- *When Should I Call the Vet, Part II.* La Jolla, CA: Lawlor Productions.

UNIT REFERENCES

Publications

- Evans, J. Warren. *Horses: A Guide to Selection, Care, and Enjoyment, (2nd ed.).* New York: W.H. Freeman and Company, 1989.
- *Equine Science.* College Station, TX: Instructional Materials Service, Texas A&M University, 1990.

- Giffin, James M. and Tom Gore. *Horse Owner's Veterinary Handbook.* New York: Howell Book House, 1989.

- Kellon, Eleanor. *Dr. Kellon's Guide to First Aid for Horses.* Ossining, New York: Breakthrough Publications, Inc., 1990.

Videos

- *When Should I Call the Vet, Part II.* La Jolla, CA: Lawlor Productions.

ASSIGNMENT SHEETS

OBJECTIVE 10

Assignment Sheet 1

1. Critical, may be colic, notify a veterinarian, monitor the horse's pulse, bowel sounds, and mucous membranes.

2. Noncritical, stop the bleeding, clean the wound and bandage.

3. Noncritical, check the vital signs, examine remainder of feed, and determine amount not eaten. If vital signs are normal, remove feed (not water) for 12-hour period and furnish with fresh feed. If significant change in vital signs or horse does not eat within 12 hours, call a veterinarian.

4. Noncritical, pick up the foot and clean thoroughly examining for nails or other foreign objects. If shod, pull shoe and examine nails for signs of blood. Check for wounds, sore places and heat at the coronary band. Check the vital signs. If all the above signs are negative, call a veterinarian. If signs are positive, remove foreign object and treat wound accordingly.

5. Critical, examine the horse for nasal discharge and eye discharge. Check the vital signs. Call a veterinarian.

6. Critical, call a veterinarian immediately, possibility of founder. Check the feed bins.

7. Critical, stop the bleeding, clean the wound, find out how much blood is coming from wound. Call a veterinarian.

8. Critical, if no part of foal has been presented at this point, call a veterinarian. While waiting for veterinarian, keep mare up and walking to prevent straining until the veterinarian arrives.

OBJECTIVE 11

Assignment Sheet 2

Case 1

First aid book, bucket and clean sponge, table salt, petroleum jelly, emergency numbers. Stop the bleeding, clean wound, apply petroleum jelly, call veterinarian.

Case 2

Equine first aid book, emergency numbers, thermometer. Take vital signs and notify veterinarian.

Case 3

First aid book, bucket and clean sponge, table salt, bandages, sterile gauze, emergency numbers. Stop bleeding, clean wound and bandage.

WRITTEN TEST

OBJECTIVE 1

Answer should include the following:

RESOURCES

- Emergency numbers
- Equine first aid book

EQUIPMENT

- Bucket and clean sponge
- Scissors
- Halter and lead rope
- Twitch or lip chain
- Hoof knife
- Hoof tester
- Stethoscope

- Thermometer
- Hypodermic syringes and needles

MEDICINE

- Antibiotic ointment or spray
- Antibiotics (oral or injectable)
- Tetanus toxoid and tetanus antitoxin

SUPPLIES

- Absorbent cotton
- Tape
- Bandages, including a set of leg wraps
- Sterile gauze pads
- Tourniquet

OTHER ITEMS

- Rubbing alcohol
- Epsom salts
- Liniment
- Petroleum jelly
- Germicidal soap
- Table salt
- Iodine

OBJECTIVE 2

Answer should include the following in any order:

- Depression
- Abnormal vital signs
- Mucous membranes discolored
- Discharge from the eyes or nose
- Dull hair coat
- Abnormal cough
- Very loose or very dry feces
- Abnormal urine
- Decreased weight

OBJECTIVE 3

Answer should include the following:

- Control the bleeding by applying direct pressure to the wound.
- Clean the wound with a saline solution and remove all dirt and foreign matter.
- Determine the severity of the wound and contact a veterinarian if necessary.
- Consult a veterinarian on the use of antibiotics and administration of tetanus antitoxin or tetanus booster shot.
- Bandage the wound to protect from dirt or other irritation, if necessary.

OBJECTIVE 4

2, 3, 5, 7, 8, 10

OBJECTIVE 5

Evaluated on Job Sheet 1.

OBJECTIVE 6

Answer should include the following:

- Depression
- Loss of appetite
- Increased pulse, heart rate, and temperature
- Sweating
- Tail-switching
- Looking at, biting, or kicking at the abdomen
- Frequently getting up and lying down
- Pawing
- Rolling
- Straining to pass urine or stool
- Abnormal or absent manure
- Discolored mucus membranes (bright red or bluish)
- Poor capillary refill
- Restless or anxious behavior

OBJECTIVE 7

Answer should include the following:

- Take notes on the horse's condition. Record items such as behavior, eating, vital signs, color of mucus membranes, capillary refill, passage of manure, and any other information that may be useful.
- After the veterinarian is notified, continue monitoring the horse.
- Walk the horse.
- If the horse is rolling violently, try to move the horse to an area where it will not hurt itself and keep it from complicating the problem.

OBJECTIVE 8

1. N
2. N
3. C
4. N
5. C
6. N
7. C
8. C
9. N
10. C
11. C

OBJECTIVE 9

Answer should include the following points:

- Allow the horse as much rest as possible.
- Provide a clean, roomy, well-bedded stall, unless the injury prevents, that is free from draft and dampness.
- Quarantine a horse with a contagious disease.
- Disinfect facilities and equipment after use.
- Provide palatable feed and fresh water.
- Keep the horse comfortable during extreme hot and cold temperature.
- Apply and administer medications according to a veterinarian's directions.
- Check vital signs for adverse change.

OBJECTIVE 10

Evaluated on Assignment Sheet 1.

OBJECTIVE 11

Evaluated on Assignment Sheet 2.

OBJECTIVE 12	1. Intramuscular injections 2. Subcutaneous injections 3. Intravenous injections
OBJECTIVE 13	**Evaluated on Job Sheet 2.**
OBJECTIVE 14	**Evaluated on Job Sheet 3.**

CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) EQUINE MANAGEMENT AND PRODUCTION

UNIT NUMBER AND TITLE B2 – BASIC FIRST AID

TOTAL NUMBER OF TEST QUESTIONS 68

TOTAL NUMBER OF BASIC SKILL QUESTIONS 20

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
1	**1-27**	**X**
2	**1-9**	**S**
3	**1**	**W**
4	**1-10**	**X**
5	**Evaluated on JS 1**	
6	**1-3**	**W**
7	**1-3**	**W**
8	**1-11**	**X**
9	**1**	**W**
10	**Evaluated on AS 1**	
11	**Evaluated on AS 2**	
12	**1-3**	**S**
13	**Evaluated on JS 2**	
14	**Evaluated on JS 3**	

INSTRUCTOR'S GUIDE

PARASITES

B3

Required Activities and Resources (R)

These are fully integrated components of this CIMC curriculum. They are usually packaged in or with the curriculum and are essential in meeting the learning objectives. To individualize this unit, use the LAP Sheet supplied in your resources.

- Reproducible Handouts and Transparency Masters are included in the Instructor's Resource Package. Handouts should be copied for all students. Transparency Masters should be used to make overhead transparencies for use during instruction. A small copy of each Transparency Master appears in the student's Information Sheets.
- Non-reproducible resources are included in the student's curriculum.

Optional Activities and Resources (O)

These are suggested high-interest activities to help deliver learning objectives to students or to let students achieve objectives in an applied context. Select as many as you wish to use. Some activities use extra resources for further information about unit content. You can make them available in the classroom for in-depth study or optional activities, but their use is not required for meeting CIMC unit objectives.

FOCUS ASSIGNMENTS

Prereading

R Have the students read the Handout *Parasites*.

Writing

R Have the students write a short discussion on the importance of knowing about parasites and how to prevent and control them.

GENERAL INSTRUCTIONS

Assignment Sheets

- R Review the directions and any specific guidelines.
- R Make certain that any needed materials from the Instructor's Resource Package are available.
- R Have the students complete the Assignment Sheet. Evaluate each student's performance and provide reteaching and retesting as necessary. Have the students repeat the Assignment Sheet until they achieve mastery.
- R Complete each student's Competency Profile.
- O Have the students volunteer to read aloud the directions and any special guidelines.
- O Return the completed Assignment Sheets to the students so that they may use them for later reference if needed.

Job Sheets

- R Review the introduction and evaluation criteria for the Job Sheet. Remind the students that they should not fill in the blanks in the Yes/No columns.
- R Review and explain all general guidelines, safety cautions, and warnings.
- R Make sure that all tools, equipment, and supplies are available.
- R Demonstrate each of the procedures outlined in the Job Sheet.
- R Allow the students to practice the Job Sheet skills before skills testing. Coach, correct, and supervise as necessary.
- R Have the students complete the Job Sheet. Evaluate each student's performance and provide remediation as necessary. Have the students repeat the Job Sheet until they achieve mastery.
- R Complete each student's Competency Profile.
- R Return the completed Job Sheets to the students so that they may use them for later reference if needed.
- O Have the students volunteer to read aloud the job guidelines, cautions, and warnings.

LAP Sheets

The LAP Sheets are an optional component that can be used to individualize instruction. The following instructions should be followed only if you are using the LAP Sheets.

R Explain the specific procedures to be followed to the students before they begin using the LAP Sheet. Be sure that each student understands the procedures for using the LAP Sheet.

R If you want the student to complete any of the assignments on the LAP Sheet that are labeled optional, assign these to the student. Be sure to provide any needed resources.

OBJECTIVE 1 **Select from a list general symptoms of parasitic infection.**

O Explain that a horse that is infected may not always show outward signs of infection. Stress the importance of observing horses for symptoms of infection.

O For further information refer to *Horse Owner's Veterinary Handbook* or *Horses: A Guide to Selection, Care, and Enjoyment.*

OBJECTIVE 2 **Classify parasites as internal or external.**

O For further information refer to *Horse Owner's Veterinary Handbook, Horses: A Guide to Selection, Care, and Enjoyment,* or *A Colour Atlas of Equine Parasites.*

OBJECTIVE 3 **Match internal parasites to their descriptions.**

O For further information refer to *Horse Owner's Veterinary Handbook* or *Horses: A Guide to Selection, Care, and Enjoyment*, or *A Colour Atlas of Equine Parasites.*

OBJECTIVE 4 **Identify external parasites.**

R Use Transparency Master 1 to illustrate external parasites.

O Ask students what they think are the most common external parasites in your area.

OBJECTIVE 5 **Complete a chart on common external parasites.**

O For further information refer to *Horse Owner's Veterinary Handbook* or *Horses: A Guide to Selection, Care, and Enjoyment.*

OBJECTIVE 6 **Describe the steps in life cycles of internal parasites.**

O For further information refer to *Horse Owner's Veterinary Handbook, Horses: A Guide to Selection, Care, and Enjoyment,* or *A Colour Atlas of Equine Parasites.*

O Obtain OSU Extension Facts No. 3976 *Controlling Common Endoparasites of the Horse* and make it available for students to read.

OBJECTIVE 7 **Select from a list families of drugs effective against internal and external parasites.**

O Bring sample labels or containers of drugs effective against internal and external parasites to class. Read the labels and discuss how they are used. Be sure to use proper handling procedures with any drug and explain label warnings to students.

OBJECTIVE 8 **List guidelines for the use of anthelmintics.**

O Discuss guidelines for the use of anthelmintics. Emphasize that if horse owners or caretakers need information on using anthelmintics they should check with their veterinarian.

OBJECTIVE 9 **Describe safety procedures when using insecticides and anthelmintics.**

O Discuss safety procedures when using insecticides and anthelmintics. Emphasize that caution must be used when handling these substances.

OBJECTIVE 10 **Use proper handling and disposal techniques for insecticides and anthelmintics. (Assignment Sheet 1)**

R See the general instructions for all Assignment Sheets.

OBJECTIVE 11

List management practices used in prevention of parasitism.

O Discuss management practices used in the prevention of parasitism. Emphasize the importance of proper management practices.

OBJECTIVE 12

Analyze case studies for factors that affect susceptibility of horses to parasites. (Assignment Sheet 2)

R See the general instructions for all Assignment Sheets.

EVALUATION

Pretest

- Use the unit Written Test for *both* the pretest and posttest. Give the students the pretest before they begin the unit.

- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving pretests and using the results. Information for ordering this material is included in the optional resources section.

- Use pretest results to guide individual students in progressing through the unit, doing enrichment work, or moving to the next unit.

Focus Assignment

- Use an informal evaluation of the focus assignments as a diagnostic tool for determining if any students need extra help in reading comprehension or writing skills. Refer these students to their English instructor, Learning Resource Center, or Educational Enhancement Center.

Assignment Sheet

- Evaluate students on Assignment Sheet activities. Students must repeat an Assignment Sheet until they have mastered the activity.

- Complete each student's Competency Profile.

Skill Test

- Explain to the students that they will be asked to demonstrate the procedures on the Job Sheets as a skills test.

- Describe the rating scale used on the skills test.
- Reteach and retest as necessary.
- Complete each student's Competency Profile.

Posttest

- After they have completed the unit, give students the Written Test again.
- Explain to the students that they will be asked to demonstrate on the Written Test actions listed in the specific objectives.
- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving posttests and using the results. Information for ordering this material is included in the optional resources section.
- Reteach and retest as necessary to meet individual student needs and state standards for student learning and competency gains.
- Complete the appropriate sections of the Competency Profiles.
- Review individual and group performance to evaluate teaching effectiveness. Adjust scope, sequence, or instructional methods for additional lessons as required.

REQUIRED RESOURCES

The items marked with an asterisk are included in the Instructor's Resource Package.

Publications

- *Parasites*. Handout.*

OPTIONAL RESOURCES

Publications

- Evans, J. Warren. *Horses: A Guide to Selection, Care, and Enjoyment, (2nd ed.).* New York: W.H. Freeman and Company, 1989.
- Giffin, James M. and Tom Gore. *Horse Owner's Veterinary Handbook*. New York: Howell Book House, 1989.

- Jacobs, Dennis E. *A Colour Atlas of Equine Parasites.* Philadelphia: Lea & Febiger, 1986.

- *Measuring Learning and Competency Gains: The Pretest/Posttest Approach.* Stillwater, OK: CIMC, Oklahoma Department of Vocational and Technical Education, 1992. For ordering information call 800-522-5810.

- OSU Extension Facts No. 3976 *Controlling Common Endoparasites of the Horse.* Stillwater, OK: Oklahoma State University Cooperative Extension Service.

  ☞ **NOTE:** For information on obtaining this fact sheet contact your local Oklahoma County Extension office.

UNIT REFERENCES

Publications

- Arnold, Carroll Brown. "Equine Parasites." *The Western Horseman,* Jan. 1992.

- *Equine Science.* College Station, TX: Instructional Materials Service, Texas A&M University, 1990.

- Evans, J. Warren. *Horses: A Guide to Selection, Care, and Enjoyment, (2nd ed.).* New York: W.H. Freeman and Company, 1989.

- Giffin, James M. and Tom Gore. *Horse Owner's Veterinary Handbook.* New York: Howell Book House, 1989.

- Jacobs, Dennis E. *A Colour Atlas of Equine Parasites.* Philadelphia: Lea & Febiger, 1986.

- OSU Extension Facts No. 3976 *Controlling Common Endoparasites of the Horse.* Stillwater, OK: Oklahoma State University Cooperative Extension Service.

ASSIGNMENT SHEETS

OBJECTIVE 10

Assignment Sheet 1

Part 1

1. For livestock and premise spray for external parasites.
2. The container should be kept sealed when not in use. Do not store near food or feed. Protect from freezing.
3. Precautionary statements, Hazards to humans and domestic animals, CAUTION, avoid contact with skin and eyes, avoid breathing spray mist, see hang tag for complete directions for use
4. Triple rinse (or equivalent). Then dispose of in a sanitary landfill or incineration or by other approved state and local procedures.
5. This pesticide is toxic to fish and water should not be contaminated with this product.

Part 2

1. Ivermectin, paste
2. Large strongyles, small strongyles, pinworms, ascarids, large-mouth stomach worms, bots, lungworms, intestinal threadworms, summer sores caused by habromena and dermatitis caused by neck threadworm microfilariae
3. This paste may be used in horses of all ages, including mares at any stage of pregnancy. This product should not be used in horses intended for food purposes.
4. This product should be used only in horses. Refrain from smoking and eating when handling. Wash hands after use. Avoid contact with eyes. Keep out of the reach of children. Do not contaminate ground or surface water.

5. 91 mcg ivermectin per lb (200 mcg/kg) body weight.

Part 3

1. Pyrantel pamoate, paste
2. For the removal and control of mature infections of large strongyles; small strongyles; pinworms, and large roundworms in horses and ponies.
3. Up to 1200 lb body weight.
4. Store at room temperature, 59°- 86° F (15°- 30° C)
5. Dosed every 4 weeks.

OBJECTIVE 12

Assignment Sheet 2

1. The susceptibility to parasites would be lessened if the owner had the geldings on a more frequent deworming schedule. The owner should check with a veterinarian regarding deworming schedules.
2. The susceptibility to parasites would be lessened if the owner removed manure from the stall daily.
3. The susceptibility to parasites would be lessened if the horses were not fed hay from the ground.
4. The susceptibility to parasites would be lessened if the pasture was rotated and rested three months of the year.
5. The susceptibility to parasites would be lessened if the manure were not spread directly from the stall.

WRITTEN TEST

OBJECTIVE 1

1, 3, 4, 5, 7, 8, 10, 11, 12

OBJECTIVE 2

1. I
2. I
3. E
4. E
5. I
6. E
7. I
8. E
9. I
10. I
11. E
12. I
13. E

OBJECTIVE 3

1. I
2. E
3. A
4. H
5. F
6. C
7. G

OBJECTIVE 4

1. Mite
2. Horn Fly
3. Barn Fly
4. Lice
5. Mosquito
6. Tick
7. Horse Fly
8. Screwworm Fly

OBJECTIVE 5

A. Manure, decomposing matter
B. Insecticides, treated halters
C. Manure, also decomposing matter
D. Horse fly
E. Bite
F. Bot fly
G. Eggs attached to hair
H. Mange
I. Ticks
J. Water (ponds, ditches, troughs)
K. Gnats

OBJECTIVE 6

Answer should include the following points:

BOTS

1. Female flies deposit small yellow eggs primarily on the hairs of the chest and forelegs.
2. The eggs hatch when exposed to the moisture, warmth, and friction of the mouth.
3. The larvae having entered the mouth burrow into the tongue.
4. The larvae are eventually swallowed and attach themselves to the lining of the horse's stomach where they grow to maturity.
5. The larvae detach from the stomach upon maturity and are passed out with feces.
6. Larvae burrow into the ground and pupate.
7. Adult fly emerges from pupa.

STRONGYLES (Bloodworms)

1. Eggs are laid by the adult worm in the intestine.
2. Eggs are passed in feces and in one to two days hatch into larvae.
3. Larvae feed on manure and develop;
4. After about a week larvae become infective and are ingested by the horse as it grazes.
5. The larvae migrate to various organs and tissues, causing damage.
6. Larvae return to the intestine and attach themselves to the gut wall, feed on the gut lining and reach maturity.

ASCARIDS (Roundworms)

1. Adult female worm lays eggs in the small intestine.
2. Eggs are passed in feces.
3. Eggs develop to an infective stage.
4. The horse ingests eggs as it eats grass, feed, feces, or drinks water.

5. The eggs hatch in the small intestine and produce larvae which penetrate the wall of the gut.
6. Larvae migrate through the liver and reach the lungs, enter the breathing tube, and are coughed up and swallowed.
7. Larvae mature into adult worms in the small intestine.

PINWORMS

1. Adult pinworm lives in the colon.
2. Female migrates to the anus and rectum and deposits eggs, or eggs are laid in the colon.
3. The eggs are sticky and attach to spots where the horse rubs its bottom such as fences or bedding or pass out with feces.
4. Eggs hatch in about a week.
5. Infective larvae are ingested, pass through to the colon, and develop into adults.

STRONGYLOIDES (Threadworms)

1. Eggs are ingested by the horse in feces or can be transmitted by mare's milk or direct penetration of skin in very young foals.
2. Larvae migrate to the lungs and return to the intestines.
3. Mature into adult worms in the intestine.

TAPEWORMS

1. Adult worms develop in the large and small intestine of the horse.
2. Eggs are passed in the feces.
3. Eggs are ingested by an intermediate host (a mite which lives in pasture).
4. The horse acquires tapeworm by eating an infected mite.

HABRONEMA (Stomach worms)

1. Adult worms lay eggs in the wall of the stomach.
2. Eggs are passed in feces.
3. Eggs are picked up by flies which serve as intermediate hosts.
4. Larvae are released from mouthparts of flies as they feed around wounds or moist areas of the body.
5. The horse swallows larvae or an infected fly.

OBJECTIVE 7 1, 2, 4, 6, 7

OBJECTIVE 8 Answer should include the following in any order:

- Deworm all animals on premises at same time.
- Deworm and quarantine all new additions to herd.
- Deworm at frequent intervals (8 weeks optimum).
- Alternate anthelmintics to avoid buildup of resistant worm population.
- Calculate dose by body weight.
- Administer by route most beneficial.
    - ☐ Stomach tube – must be done by a veterinarian
    - ☐ Dose syringe – place substance on back of tongue
    - ☐ Feed additives – sprinkle on feed
    - ☐ Pastes - place drug on back of the tongue
- Take extra precautions in deworming foals, pregnant mares, heavily parasitized, or very poor animals.

- Deworm broodmares 30 days before foaling.
- Consult a veterinarian concerning fecal examinations and abnormalities.

OBJECTIVE 9

Answer should include the following in any order:

- Follow label directions carefully.
- Use only anthelmintics/insecticides approved and recommended for use on horses.
- Avoid contamination of feed and water supplies when administering insecticides.
- Know toxicity signs of insecticide poisoning.
- Store out of way and in a safe place.
- Place baits for external parasites where children and animals cannot get to them.

OBJECTIVE 10

Evaluated on Assignment Sheet 1.

OBJECTIVE 11

Answer should include the following in any order:

- Feed hay and grain in trough and/or manger, not on the ground.
- Supply fresh, clean water.
- Clean manure daily from stalls and small paddocks.
- Store manure in a tightly constructed pit for at least a two-week interval prior to spreading.
- Mow and rake pastures frequently.
- Rotate pasture, alternately graze cattle and horses, and let the pasture rest three months of the year.

- Treat infected animals prior to turning them out to a clean area.
- Deworm at two-month intervals.
- Treat with effective insecticide during late spring, summer, and early fall.
- Provide good sanitary measures and a high level of nutrition.
- Control fly population in barns.

OBJECTIVE 12 **Evaluated on Assignment Sheet 2.**

CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) EQUINE MANAGEMENT AND PRODUCTION

UNIT NUMBER AND TITLE B3 – PARASITES

TOTAL NUMBER OF TEST QUESTIONS 87

TOTAL NUMBER OF BASIC SKILL QUESTIONS 24

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
1	1-12	X
2	1-13	X
3	1-7	X
4	1-8	S
5	1-11	X
6	1-7	S, W
7	1-8	S
8	1-9	X
9	1	W
10	Evaluated on AS 1	
11	1-11	X
12	Evaluated on AS 2	

INSTRUCTOR'S GUIDE

FUNDAMENTALS OF FOOT CARE

B4

Required Activities and Resources (R)

These are fully integrated components of this CIMC curriculum. They are usually packaged in or with the curriculum and are essential in meeting the learning objectives. To individualize this unit, use the LAP Sheet supplied in your resources.

- Reproducible Handouts and Transparency Masters are included in the Instructor's Resource Package. Handouts should be copied for all students. Transparency Masters should be used to make overhead transparencies for use during instruction. A small copy of each Transparency Master appears in the student's Information Sheets.
- Non-reproducible resources are included in the student's curriculum.

Optional Activities and Resources (O)

These are suggested high-interest activities to help deliver learning objectives to students or to let students achieve objectives in an applied context. Select as many as you wish to use. Some activities use extra resources for further information about unit content. You can make them available in the classroom for in-depth study or optional activities, but their use is not required for meeting CIMC unit objectives.

FOCUS ASSIGNMENTS

Prereading

R Have students read the Handout *No Feet, No Horse.*

Writing

R Have the students write a short discussion on the importance of healthy feet for the horse.

GENERAL INSTRUCTIONS

Assignment Sheets

R Review the directions and any specific guidelines.

R Make certain that any needed materials from the Instructor's Resource Package are available.

R Have the students complete the Assignment Sheet. Evaluate each student's performance and provide reteaching and retesting as necessary. Have the students repeat the Assignment Sheet until they achieve mastery.

R Complete each student's Competency Profile.

O Have the students volunteer to read aloud the directions and any special guidelines.

O Return the completed Assignment Sheets to the students so that they may use them for later reference if needed.

Job Sheets

R Review the introduction and evaluation criteria for the Job Sheet. Remind the students that they should not fill in the blanks in the Yes/No columns.

R Review and explain all general guidelines, safety cautions, and warnings.

R Make sure that all tools, equipment, and supplies are available.

R Demonstrate each of the procedures outlined in the Job Sheet.

R Allow the students to practice the Job Sheet skills before skills testing. Coach, correct, and supervise as necessary.

R Have the students complete the Job Sheet. Evaluate each student's performance and provide remediation as necessary. Have the students repeat the Job Sheet until they achieve mastery.

R Complete each student's Competency Profile.

R Return the completed Job Sheets to the students so that they may use them for later reference if needed.

O Have the students volunteer to read aloud the job guidelines, cautions, and warnings.

LAP Sheets

The LAP Sheets are an optional component that can be used to individualize instruction. The following instructions should be followed only if you are using the LAP Sheets.

R Explain the specific procedures to be followed to the students before they begin using the LAP Sheet. Be sure that each student understands the procedures for using the LAP Sheet.

R If you want the student to complete any of the assignments on the LAP Sheet that are labeled optional, assign these to the student. Be sure to provide any needed resources.

OBJECTIVE 1

Match external parts of the foot and lower leg to their definitions.

R Show Transparency Masters 1 and 2 to illustrate the external parts of the foot.

O Show the appropriate sections of the video *Fancy Footwork.*

O For further information refer to *Horses: A Guide to Selection, Care, and Enjoyment* or *Horse Owner's Veterinary Handbook.*

OBJECTIVE 2

Label internal parts of the foot and lower leg.

R Show Transparency Master 3 to illustrate the internal parts of the foot and lower leg. Circulate around the room to ensure students write the correct information in their Information Sheet.

O Show the appropriate sections of the video *Fancy Footwork.*

O For further information refer to *Horses: A Guide to Selection, Care, and Enjoyment* or *Horse Owner's Veterinary Handbook.*

OBJECTIVE 3

Match parts of the foot and lower leg to their specific relationships and/or functions.

O Discuss the parts of the foot and emphasize that the parts of the foot work together.

O For further information refer to *Horses: A Guide to Selection, Care, and Enjoyment* or *Horse Owner's Veterinary Handbook.*

OBJECTIVE 4

Select from a list the critical factors in the care of a foot.

O For further information refer to *Horses: A Guide to Selection, Care, and Enjoyment* or *Horse Owner's Veterinary Handbook.*

OBJECTIVE 5

List means of maintaining sufficient moisture in the hoof.

O Emphasize that moisture content is important to the hoof in order to keep the hoof from drying out.

OBJECTIVE 6

Select from a list the most common causes of lameness.

O Discuss the fact that many causes of lameness are preventable if proper precautions are taken by the horse owner or caretaker.

OBJECTIVE 7

Lift, clean, and check a horse's foot. (Job Sheet 1)

R See the general instructions for all Job Sheets.

EVALUATION

Pretest

- Use the unit Written Test for *both* the pretest and posttest. Give the students the pretest before they begin the unit.
- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving pretests and using the results. Information for ordering this material is included in the optional resources section.
- Use pretest results to guide individual students in progressing through the unit, doing enrichment work, or moving to the next unit.

Focus Assignment

- Use an informal evaluation of the focus assignments as a diagnostic tool for determining if any students need extra help in reading comprehension or writing skills. Refer these students to their English instructor, Learning Resource Center, or Educational Enhancement Center.

Assignment Sheet

- Evaluate students on Assignment Sheet activities. Students must repeat an Assignment Sheet until they have mastered the activity.
- Complete each student's Competency Profile.

Skill Test

- Explain to the students that they will be asked to demonstrate the procedures on the Job Sheets as a skills test.
- Describe the rating scale used on the skills test.
- Reteach and retest as necessary.
- Complete each student's Competency Profile.

Posttest

- After they have completed the unit, give students the Written Test again.
- Explain to the students that they will be asked to demonstrate on the Written Test actions listed in the specific objectives.
- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving posttests and using the results. Information for ordering this material is included in the optional resources section.
- Reteach and retest as necessary to meet individual student needs and state standards for student learning and competency gains.
- Complete the appropriate sections of the Competency Profiles.
- Review individual and group performance to evaluate teaching effectiveness. Adjust scope, sequence, or instructional methods for additional lessons as required.

REQUIRED RESOURCES

The items marked with an asterisk are included in the Instructor's Resource Package.

Publications

- *No Feet, No Horse.* Handout.*

OPTIONAL RESOURCES

Publications

- Evans, J. Warren. *Horses: A Guide to Selection, Care, and Enjoyment, (2nd ed.).* New York: W.H. Freeman and Company, 1989.
- Giffin, James M. and Tom Gore. *Horse Owner's Veterinary Handbook.* New York: Howell Book House, 1989.
- *Measuring Learning and Competency Gains: The Pretest/Posttest Approach.* Stillwater, OK: CIMC, Oklahoma Department of Vocational and Technical Education, 1992. For ordering information call 800-522-5810.

Videos

- *Fancy Footwork.* Equalign.

  ☑ **NOTE:** This video is included in the Media Package available through CIMC.

UNIT REFERENCES

Publications

- Evans, J. Warren. *Horses: A Guide to Selection, Care, and Enjoyment, (2nd ed.).* New York: W.H. Freeman and Company, 1989.
- Giffin, James M. and Tom Gore. *Horse Owner's Veterinary Handbook.* New York: Howell Book House, 1989.
- Scheid, Dan W. and H. Lee Schwanz. *How to Buy a Healthy Horse and Keep Him That Way.* Brookfield, WI: Farmer's Digest, Inc., 1985.

Videos

- *Fancy Footwork.* Equalign.

WRITTEN TEST

OBJECTIVE 1

1. C
2. D
3. B
4. A
5. I
6. N
7. G
8. L
9. E
10. Q
11. J
12. K
13. T
14. F
15. S

OBJECTIVE 2

A. Cannon Bone
B. Fetlock Joint
C. Long Pastern
D. Pastern Joint
E. Short Pastern
F. Coffin Bone
G. Laminae
H. Coffin Joint
I. Navicular Bone

OBJECTIVE 3

1. H
2. N
3. F
4. A
5. M
6. D
7. P
8. C
9. R
10. Q
11. S
12. K
13. I

OBJECTIVE 4

1, 3, 4, 6, 8, 9, 10

OBJECTIVE 5

Answer should include the following in any order:

- Soaking
- Applying hoof dressing
- Packing with mud

OBJECTIVE 6

1, 2, 4, 6, 7, 9, 10

OBJECTIVE 7

Evaluated on the Job Sheet.

CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) EQUINE MANAGEMENT AND PRODUCTION

UNIT NUMBER AND TITLE B4 – FUNDAMENTALS OF FOOT CARE

TOTAL NUMBER OF TEST QUESTIONS 60

TOTAL NUMBER OF BASIC SKILL QUESTIONS 37

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
1	1-15	S
2	A-I	S
3	1-13	S
4	1-10	X
5	1-3	X
6	1-10	X

INSTRUCTOR'S GUIDE

COMMON LEG AND FOOT PROBLEMS, TRIMMING AND SHOEING

B5

Required Activities and Resources (R)

These are fully integrated components of this CIMC curriculum. They are usually packaged in or with the curriculum and are essential in meeting the learning objectives. To individualize this unit, use the LAP Sheet supplied in your resources.

- Reproducible Handouts and Transparency Masters are included in the Instructor's Resource Package. Handouts should be copied for all students. Transparency Masters should be used to make overhead transparencies for use during instruction. A small copy of each Transparency Master appears in the student's Information Sheets.
- Non-reproducible resources are included in the student's curriculum.

Optional Activities and Resources (O)

These are suggested high-interest activities to help deliver learning objectives to students or to let students achieve objectives in an applied context. Select as many as you wish to use. Some activities use extra resources for further information about unit content. You can make them available in the classroom for in-depth study or optional activities, but their use is not required for meeting CIMC unit objectives.

FOCUS ASSIGNMENTS

Prereading

R Have students read the OSU Fact Sheet *Laminitis in Horses.*

Writing

R Have the students write a short discussion on how laminitis might seriously affect a horse.

GENERAL INSTRUCTIONS

Assignment Sheets

R Review the directions and any specific guidelines.

R Make certain that any needed materials from the Instructor's Resource Package are available.

R Have the students complete the Assignment Sheet. Evaluate each student's performance and provide reteaching and retesting as necessary. Have the students repeat the Assignment Sheet until they achieve mastery.

R Complete each student's Competency Profile.

O Have the students volunteer to read aloud the directions and any special guidelines.

O Return the completed Assignment Sheets to the students so that they may use them for later reference if needed.

Job Sheets

R Review the introduction and evaluation criteria for the Job Sheet. Remind the students that they should not fill in the blanks in the Yes/No columns.

R Review and explain all general guidelines, safety cautions, and warnings.

R Make sure that all tools, equipment, and supplies are available.

R Demonstrate each of the procedures outlined in the Job Sheet.

R Allow the students to practice the Job Sheet skills before skills testing. Coach, correct, and supervise as necessary.

R Have the students complete the Job Sheet. Evaluate each student's performance and provide remediation as necessary. Have the students repeat the Job Sheet until they achieve mastery.

R Complete each student's Competency Profile.

R Return the completed Job Sheets to the students so that they may use them for later reference if needed.

O Have the students volunteer to read aloud the job guidelines, cautions, and warnings.

LAP Sheets

The LAP Sheets are an optional component that can be used to individualize instruction. The following instructions should be followed only if you are using the LAP Sheets.

R Explain the specific procedures to be followed to the students before they begin using the LAP Sheet. Be sure that each student understands the procedures for using the LAP Sheet.

R If you want the student to complete any of the assignments on the LAP Sheet that are labeled optional, assign these to the student. Be sure to provide any needed resources.

OBJECTIVE 1

List general situations relating to unsoundness.

O Discuss general situations relating to unsoundness. Emphasize that there are various degrees of injuries or illnesses.

OBJECTIVE 2

Match major diseases and injuries causing unsoundness to their definitions.

O Refer to *Horse Owner's Veterinary Handbook* or *Horses: A Guide to Selection, Care, and Enjoyment* for further information.

O Discuss treatment and care for diseases and injuries of the leg. Emphasize that horse owners and caretakers should consult with a veterinarian regarding treatment.

OBJECTIVE 3

Match major diseases and injuries of the foot to their definitions.

R Use Transparency Master 1 to illustrate some common leg and foot problems.

O Refer to *Horse Owner's Veterinary Handbook* or *Horses: A Guide to Selection, Care, and Enjoyment* for further information.

OBJECTIVE 4

List common unsoundnesses that result in retiring horses.

O Discuss common unsoundnesses that result in retiring horses.

OBJECTIVE 5 **Describe diagnostic procedures for detecting lameness.**

O Discuss diagnostic procedures for detecting lameness.

O Show students the procedure for detecting lameness on an actual horse.

OBJECTIVE 6 **Select from a list causes of lameness in which symptoms decrease with use.**

O Emphasize that horses with lameness problems should be treated very carefully. Check with a veterinarian on the amount and type of exercise that the horse should perform.

OBJECTIVE 7 **Match the suspected areas of lameness to the correct indications.**

O Discuss the suspected areas of lameness and their indications. Emphasize that this means the area should be checked for lameness.

OBJECTIVE 8 **Analyze case studies to determine the possible indications and locations of lameness. (Assignment Sheet)**

R See the general instructions for all Assignment Sheets.

OBJECTIVE 9 **Label basic farrier tools.**

O Bring examples of farrier tools and leave out for students to examine.

OBJECTIVE 10 **Select from a list considerations when preparing the hoof for trimming and/or shoeing.**

R Show the appropriate sections of the video *Fancy Footwork*.

O Discuss considerations when preparing the hoof for trimming and/or shoeing. Emphasize factors that relate to safety.

OBJECTIVE 11 **List common faults in preparation of the hoof.**

O Discuss common faults in preparation of the hoof. Emphasize that horse owners and caretakers must communicate with and work with their farrier regarding horseshoeing.

OBJECTIVE 12

Complete a chart on conformation defects of forelegs.

R Use Transparency Master 2 to illustrate conformation defects of forelegs.

OBJECTIVE 13

Complete a chart on conformation defects of hind legs.

R Use Transparency Master 3 to illustrate conformation defects of hind legs.

OBJECTIVE 14

Select from a list guidelines for effective shoeing.

O Discuss guidelines for effective shoeing. Emphasize that horse owners and caretakers must work with their farrier.

OBJECTIVE 15

Remove a shoe. (Job Sheet 1)

R See the general requirements for all Job Sheets.

R Show the appropriate sections of the video *Fancy Footwork*.

OBJECTIVE 16

Trim a foot. (Job Sheet 2)

R See the general instructions for all Job Sheets.

R Show the appropriate sections of the video *Fancy Footwork*.

EVALUATION

Pretest

- Use the unit Written Test for *both* the pretest and posttest. Give the students the pretest before they begin the unit.
- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving pretests and using the results. Information for ordering this material is included in the optional resources section.
- Use pretest results to guide individual students in progressing through the unit, doing enrichment work, or moving to the next unit.

Focus Assignment

- Use an informal evaluation of the focus assignments as a diagnostic tool for determining if any students need extra help in reading comprehension or writing skills. Refer these students to their English instructor, Learning Resource Center, or Educational Enhancement Center.

Assignment Sheet

- Evaluate students on Assignment Sheet activities. Students must repeat an Assignment Sheet until they have mastered the activity.
- Complete each student's Competency Profile.

Skill Test

- Explain to the students that they will be asked to demonstrate the procedures on the Job Sheets as a skills test.
- Describe the rating scale used on the skills test.
- Reteach and retest as necessary.
- Complete each student's Competency Profile.

Posttest

- After they have completed the unit, give students the Written Test again.
- Explain to the students that they will be asked to demonstrate on the Written Test actions listed in the specific objectives.
- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving posttests and using the results. Information for ordering this material is included in the optional resources section.
- Reteach and retest as necessary to meet individual student needs and state standards for student learning and competency gains.
- Complete the appropriate sections of the Competency Profiles.

- Review individual and group performance to evaluate teaching effectiveness. Adjust scope, sequence, or instructional methods for additional lessons as required.

REQUIRED RESOURCES

The items marked with an asterisk are included in the Instructor's Resource Package.

Publications

- OSU Fact Sheet F-9115 *Laminitis in Horses.* Stillwater, OK: Oklahoma State University Cooperative Extension Service.

  ☑ **NOTE:** This fact sheet is packaged with the student workbooks.

Videos

- *Fancy Footwork.* Equalign.

  ☑ **NOTE:** This video is included in the Media Package available through CIMC.

OPTIONAL RESOURCES

Publications

- *Measuring Learning and Competency Gains: The Pretest/Posttest Approach.* Stillwater, OK: CIMC, Oklahoma Department of Vocational and Technical Education, 1992. For ordering information call 800-522-5810.

UNIT REFERENCES

Publications

- Evans, J. Warren. *Horses: A Guide to Selection, Care, and Enjoyment, (2nd ed.).* New York: W.H. Freeman and Company, 1989.
- Giffin, James M. and Tom Gore. *Horse Owner's Veterinary Handbook.* New York: Howell Book House, 1989.
- Naviaux, James L. *Horses In Health and Disease.* Philadelphia: Lea & Febiger, 1985.

Videos

- *Fancy Footwork.* Equalign.

ASSIGNMENT SHEETS

OBJECTIVE 8

Assignment Sheet

1. The horse may have a bruised sole.
2. The horse may have trouble walking because of the problems.
3. The horse may have strained or pulled a muscle.

WRITTEN TEST

OBJECTIVE 1

Answer should include the following in any order:

- Poor conformation
- Improper foot care
- Nutritional deficiencies
- Disease
- Accident and injury
- Improper shoeing

OBJECTIVE 2

1. D
2. W
3. E
4. F
5. G
6. H
7. O
8. J
9. P
10. U
11. N
12. M
13. L
14. S
15. I
16. K
17. A
18. C
19. B
20. Q
21. R

OBJECTIVE 3

1. I
2. L
3. G
4. H
5. J
6. E
7. A
8. D
9. K
10. B

OBJECTIVE 4

Answer should include the following in any order:

- Bowed tendon
- Knee injury
- Osselet
- Bucked shin
- Splint

- Fractured sesamoid
- Fractured fibula
- Quarter crack

OBJECTIVE 5

Answer should include the following points:

- Visual examination
    1. Observe any swellings, enlargements, or defects in conformation.
    2. Allow the horse to stand; observe if efforts are made to compensate for pain by shifting weight.
    3. Observe characteristics of the gait.
        a. Use the trot as the most evident gait if location of lameness is not evident.
        b. Observe from a distance.
        c. Observe from three locations: front, side, and rear.
        d. Listen for sounds of feet striking the ground; an unsound foot strikes the ground with less noise.
        e. Watch for nodding of the head for indication of lameness of the front leg.
- Examination by palpation
    1. Bottom of foot for injury or contracted heels
    2. Hoof wall for excessive dryness, contraction, cracks, and evenness of wear
    3. Coronary band for heat
    4. Lateral cartilages for calcification
    5. Pastern area for temperature and swelling
    6. Fetlock joint for areas of pain from pressure, especially over the sesamoid area

7. Cannon bone for splints or bucked shins

- Hoof tester – instrument used to apply pressure to the sole of the foot

- X-rays – radiographs to determine if a fracture is present or hard swellings are bony or fibrous in nature

OBJECTIVE 6

1, 3, 4, 6, 7, 8, 10

OBJECTIVE 7

1. C
2. G
3. H
4. E
5. D
6. A

OBJECTIVE 8

Evaluated on the Assignment Sheet.

OBJECTIVE 9

1. Farrier's Hammer
2. Hoof Nipper
3. Nail Clincher
4. Shoe Puller
5. Pritchel
6. Rasp
7. Hoof knife
8. Hoof pick/brush
9. Clinch cutter
10. Hoof Level
11. Farrier's Apron
12. Anvil
13. Divider

OBJECTIVE 10

1, 2, 3, 5, 6, 8, 9, 10, 11, 12, 14, 15

OBJECTIVE 11

Answer should include the following in any order:

- Overleveling of the wall
- Cutting away the frog
- Scooping the quarters
- Shaping the foot
- Cutting too short

OBJECTIVE 12

1. Base-wide
2. Outside of fetlock and pastern
3. Outside pastern
4. Splay-footed
5. None
6. Fetlock area
7. Knock-knees
8. None

OBJECTIVE 13

1. Legs
2. Base-wide
3. Inside of hock joint
4. Rear of hock
5. Lower heels as much as possible

OBJECTIVE 14

1, 2, 4, 6, 7, 8, 10, 11, 12

OBJECTIVE 15

Evaluated on Job Sheet 1.

OBJECTIVE 16

Evaluated on Job Sheet 2.

CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) EQUINE MANAGEMENT AND PRODUCTION

UNIT NUMBER AND TITLE B5 – COMMON LEG AND FOOT PROBLEMS, TRIMMING AND SHOEING

TOTAL NUMBER OF TEST QUESTIONS 122

TOTAL NUMBER OF BASIC SKILL QUESTIONS 35

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
1	1-6	X
2	1-21	S
3	1-10	S
4	1-8	X
5	1-4	S
6	1-10	X
7	1-6	X
8	Evaluated on AS	
9	1-12	X
10	1-15	X
11	1-5	X
12	1-8	X
13	1-5	X
14	1-12	X
15	Evaluated on JS 1	
16	Evaluated on JS 2	

INSTRUCTOR'S GUIDE

PRACTICAL HORSE NUTRITION

C1

Required Activities and Resources (R)

These are fully integrated components of this CIMC curriculum. They are usually packaged in or with the curriculum and are essential in meeting the learning objectives. To individualize this unit, use the LAP Sheet supplied in your resources.

- Reproducible Handouts and Transparency Masters are included in the Instructor's Resource Package. Handouts should be copied for all students. Transparency Masters should be used to make overhead transparencies for using during instruction. A small copy of each Transparency Master appears in the student's Information Sheets.
- Non-reproducible resources are included in the student's curriculum.

Optional Activities and Resources (O)

These are suggested high-interest activities to help deliver learning objectives to students or to let students achieve objectives in an applied context. Select as many as you wish to use. Some activities use extra resources for further information about the unit content. You can make them available in the classroom for in-depth study or optional activities, but their use is not required for meeting CIMC unit objectives.

FOCUS ASSIGNMENTS

Prereading

R Have the students read *Nutritional Concerns for Exercising Horses*, OSU Extension Facts No. 3970, or *Nutritional Considerations for Broodmares*, OSU Extension Facts No. 3975.

Writing

R Have the students write a short explanation of what nutritional considerations must be taken into account for either the exercising horse or the broodmare.

GENERAL INSTRUCTIONS

Assignment Sheets

R Review the directions and any specific guidelines.

R Make certain that any needed materials from the Instructor's Resource Package are available.

R Have the students complete the Assignment Sheet. Evaluate each student's performance and provide reteaching and retesting as necessary. Have the students repeat the Assignment Sheet until they achieve mastery.

R Complete each student's Competency Profile.

O Have the students volunteer to read aloud the directions and any special guidelines.

O Return the completed Assignment Sheets to the students so that they may use them for later reference if needed.

Job Sheets

R Review the introduction and evaluation criteria for the Job Sheet. Remind the students that they should not fill in the blanks in the Yes/No columns.

R Review and explain all general guidelines, safety cautions, and warnings.

R Make sure that all tools, equipment, and supplies are available.

R Demonstrate each of the procedures outlined in the Job Sheet.

R Allow the students to practice the Job Sheet skills before skills testing. Coach, correct, and supervise as necessary.

R Have the students complete the Job Sheet. Evaluate each student's performance and provide remediation as necessary. Have the students repeat the Job Sheet until they achieve mastery.

R Complete each student's Competency Profile.

R Return the completed Job Sheets to the students so that they may use them for later reference if needed.

O Have the students volunteer to read aloud the job guidelines, cautions, and warnings.

LAP Sheets

The LAP Sheets are an optional component that can be used to individualize instruction. The following instructions should be followed only if you are using the LAP Sheets.

R Explain the specific procedures to be followed to the students before they begin using the LAP Sheet. Be sure that each student understands the procedures for using the LAP Sheet.

R If you want the student to complete any of the assignments on the LAP Sheet that are labeled optional, assign these to the student. Be sure to provide any needed resources.

OBJECTIVE 1

Complete a diagram concerning the length and capacity of the components of the digestive system.

R Discuss the horse's digestive system and how the digestive tract of the horse works. For further information refer to *Feeding to Win II* or *Horse Feeding and Nutrition.*

O Compare the horse's digestive system to that of other livestock such as the cow.

O Show the appropriate sections from the video *Feeding Management for Horses* or *Equine Nutrition: The Art, Science, and Common Sense of Feeding.*

OBJECTIVE 2

Match digestive enzymes and acids to the foods digested by each.

O Discuss the foods digested by the digestive enzymes and acids.

OBJECTIVE 3

List types of nutrients and their purpose.

O Obtain OSU publication E-910 *Mineral Needs for Horses: A Survey of Mineral Content of Oklahoma Forages and Grains* and make it available for students to read.

O Show the appropriate sections from the video *Feeding Management for Horses* or *Equine Nutrition: The Art, Science, and Common Sense of Feeding.*

R For further information refer to *Feeding to Win II* or *Horse Feeding and Nutrition.*

OBJECTIVE 4

List functions of nutrients supplied by feed.

O Show the appropriate sections from the video *Feeding Management for Horses* or *Equine Nutrition: The Art, Science, and Common Sense of Feeding.*

R For further information refer to *Feeding to Win II* or *Horse Feeding and Nutrition.*

OBJECTIVE 5

Classify symptoms of nutritional deficiencies as protein, mineral, vitamin, or carbohydrate deficiencies.

O Give students examples of nutritional deficiencies and ask them to provide the cause.

R For further information refer to *Feeding to Win II* or *Horse Feeding and Nutrition.*

OBJECTIVE 6

Select from a list factors affecting digestion.

O Show the appropriate sections from the video *Feeding Management for Horses* or *Equine Nutrition: The Art, Science, and Common Sense of Feeding.*

R For further information refer to *Feeding to Win II* or *Horse Feeding and Nutrition.*

OBJECTIVE 7

Distinguish between classifications of feeds.

O Obtain OSU Extension Facts No. 3980 *Use of Forages for Horses* and make it available for students to read.

O Show the appropriate sections from the video *Feeding Management for Horses* or *Equine Nutrition: The Art, Science, and Common Sense of Feeding.*

R For further information refer to *Feeding to Win II* or *Horse Feeding and Nutrition.*

OBJECTIVE 8

Select from a list factors affecting feed intake.

O Show the appropriate sections from the video *Feeding Management for Horses* or *Equine Nutrition: The Art, Science, and Common Sense of Feeding.*

R For further information refer to *Feeding to Win II* or *Horse Feeding and Nutrition.*

OBJECTIVE 9

Select from a list metabolic disorders directly attributed to feeding.

O Discuss examples of metabolic disorders attributed to feeding. Ask students if they have examples or experiences with any of the metabolic disorders.

R For further information refer to *Feeding to Win II* or *Horse Feeding and Nutrition.*

OBJECTIVE 10

Discuss factors to consider in selection of commercial feeds.

O Show students several examples of labels from commercially available feed. Ask students questions about the labels.

O Obtain OSU Current Report CR-3982 *Alternatives in Grain Selections for Horse Rations* and/or CR-3969 *The Effects of Adding Grain and Supplements to Commercially Available Grain Mixes for Horses* and make them available for students to read.

O Show the appropriate sections from the video *Feeding Management for Horses* or *Equine Nutrition: The Art, Science, and Common Sense of Feeding.*

R For further information refer to *Feeding to Win II* or *Horse Feeding and Nutrition.*

OBJECTIVE 11

Discuss management practices to consider when feeding.

O Obtain OSU Extension Facts No. 3973 *Feeding Management of the Equine* and/or No. 3981 *Managing Grazing of Horses* and make them available for students to read.

O Show the appropriate sections from the video *Feeding Management for Horses* or *Equine Nutrition: The Art, Science, and Common Sense of Feeding.*

R For further information refer to *Feeding to Win II* or *Horse Feeding and Nutrition.*

OBJECTIVE 12

Balance daily ration for a mature horse weighing 1100 pounds. (Assignment Sheet 1)

R See the general instructions for all Assignment Sheets.

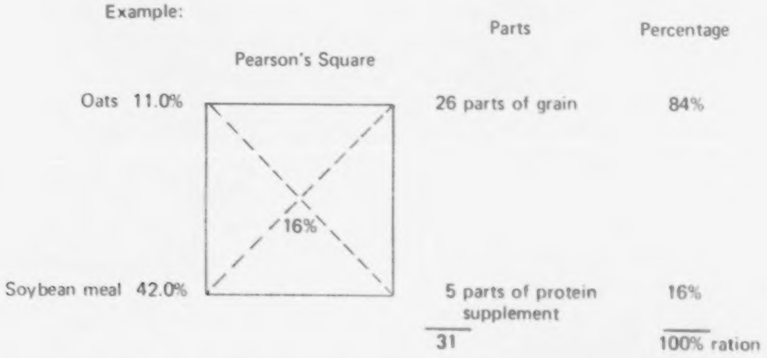
R Instruct students on the use of the computer. MS or PC DOS is required to run this program.

O Obtain OSU Extension Facts No. 3973 *Ration Formulation for Horses* and make it available for students to read.

O Discuss balancing a ration using the Pearson's square method. The method is outlined below:

1. Draw a square with diagonal dotted lines.
2. Place the desired protein level of the concentrate ration in the center of the square.
3. Place the percentage protein of the two feeds being used at the left-hand corners of the square. (Percent protein of grain or average percentage of grains should be in one corner and protein supplement in the other corner.)
4. Subtract smaller percentage from larger following the dotted lines.
5. Look for the results, directly across the square, which indicate the number of parts of each feed needed in the ration to balance it.
6. Total the parts of feed needed.
7. Divide total parts into the grain and protein parts to get the respective percentage of each (round off to the nearest percentage).

Example:



O Give students problems of balancing a ration and have them use the Pearson's square method to balance the ration.

OBJECTIVE 13

Compare rations for horses with particular circumstances. (Assignment Sheet 2)

R See the general instructions for all Assignment Sheets.

R Give students several examples of the different categories of horses to compare. Let students explore the program and come up with their own comparisons for the assignment sheet.

EVALUATION

Pretest

- Use the unit Written Test for *both* the pretest and posttest. Give the students the pretest before they begin the unit.
- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving pretests and using the results. Information for ordering this material is included in the optional resources section.
- Use pretest results to guide individual students in progressing through the unit, doing enrichment work, or moving to the next unit.

Focus Assignment

- Use an informal evaluation of the focus assignments as a diagnostic tool for determining if any students need extra help in reading comprehension or writing skills. Refer these students to their English instructor, Learning Resource Center, or Educational Enhancement Center.

Assignment Sheet

- Evaluate students on Assignment Sheet activities if not previously done. Students must repeat an Assignment Sheet until they have mastered the activity.
- Complete each student's Competency Profile.

Skill Test

- Explain to the students that they will be asked to demonstrate the procedures on the Job Sheets as a skills test.

- Describe the rating scale used on the skills test.
- Reteach and retest as necessary.
- Complete each student's Competency Profile.

Posttest

- After they have completed the unit, give students the Written Test again.
- Explain to the students that they will be asked to demonstrate on the Written Test actions listed in the specific objectives.
- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving posttests and using the results. Information for ordering this material is included in the optional resources section.
- Reteach and retest as necessary to meet individual student needs and state standards for student learning and competency gains.
- Complete the appropriate sections of the Competency Profiles.
- Review individual and group performance to evaluate teaching effectiveness. Adjust scope, sequence, or instructional methods for additional lessons as required.

REQUIRED RESOURCES

The items marked with an asterisk are included in the Instructor's Resource Package.

Publications

- *Nutrient Requirements of Horses*, (5th ed.). Washington, DC: National Academy Press, 1989.

  ☑ **NOTE:** This book is included in the Media Package available through CIMC.

- *Nutritional Considerations for Broodmares*, OSU Extension Facts F-3975. Stillwater, OK: Oklahoma Cooperative Extension Service, 1990.

- *Nutritional Concerns for Exercising Horses*, OSU Extension Facts F-3970. Stillwater, OK: Oklahoma Cooperative Extension Service.

☑ **NOTE:** These fact sheets are packaged with the student workbooks.

Computer Software

- *Nutrient Requirements of Horses*, software program.

☑ **NOTE:** This software program is included with the book *Nutrient Requirements of Horses*, fifth edition.

OPTIONAL RESOURCES

Publications

- *Measuring Learning and Competency Gains: The Pretest/Posttest Approach.* Stillwater, OK: CIMC, Oklahoma Department of Vocational and Technical Education, 1992. For ordering information call 800-522-5810.
- The following Oklahoma State University Cooperative Extension Service publications:
  - *The Effects of Adding Grain and Supplements to Commercially Available Grain Mixes for Horses*, CR-3969.
  - *Feeding Management of the Equine*, F-3973
  - *Use of Forages for Horses*, F-3980
  - *Managing Grazing of Horses*, F-3981
  - *Alternatives in Grain Selections for Horse Rations*, CR-3982
  - *Ration Formulation for Horses*, F-3997
  - *Mineral Needs for Horses: A Survey of Mineral Content of Oklahoma Forages and Grains*, E-910
  - *Managing Young Horses for Sound Growth*, F-3977
  - *Blister Beetles and Alfalfa*, F-2072

☑ **NOTE:** For information on obtaining OSU Cooperative Extension Fact Sheets contact your local Oklahoma County Extension office.

Videos

- *Equine Nutrition: The Art, Science and Common Sense of Feeding Horses*. TKO Equine Video, 1987.

- *Feeding Management for Horses.* Stillwater, OK: Oklahoma State University.

  ☑ **NOTE:** For information on this video contact your local Oklahoma County Extension office.

UNIT REFERENCES

Publications

- *Equine Science.* College Station, TX: Texas A&M University: Instructional Materials Service, 1990.
- Evans, J. Warren. *Horses: A Guide to Selection, Care, and Enjoyment.* New York: W.H. Freeman and Company, 1989.
- *Feeding Management of the Equine.* OSU Extension Facts No. F-3970. Stillwater, OK: Oklahoma State University Cooperative Extension Service.
- Giffin, James M. and Tom Gore. *Horse Owner's Veterinary Handbook.* New York: Howell Book House, 1989.
- *Nutrient Requirements of Horses,* (5th ed.). Washington, DC: National Academy Press, 1989.
- *Ration Formulation for Horses.* OSU Extension Facts No. F-3997. Stillwater, OK: Oklahoma State University Cooperative Extension Service.

Videos

- *Equine Nutrition: The Art, Science and Common Sense of Feeding Horses.* TKO Equine Video, 1987.
- *Feeding Management for Horses.* Stillwater, OK: Oklahoma Cooperation Extension Service.

Computer Software

- *Nutrient Requirements of Horses,* software program. Washington, DC: National Academy Press, 1989.

ASSIGNMENT SHEETS

OBJECTIVE 12

Assignment Sheet 1

	Required	Ration Contains
Digestible Energy	16.4 Mcal/day	16.4 Mcal
Crude Protein	655 g	1.310 g
Calcium	20 g	93 g
Phosphorus	14 g	14 g

The ration meets the horse's nutrient requirements.

OBJECTIVE 13

Assignment Sheet 2

Student answers will vary. Answers should compare two different categories of horses. Answers should contain correct spelling, grammar, and punctuation.

WRITTEN TEST

OBJECTIVE 1

A. 4-5 feet
B. 8-19 quarts (8%)
C. 1 foot
D. 10-12 feet, 16 quarts (9%)
E. 10-12 feet, 86 quarts (38%)
F. 4 feet, 28-36 quarts (15%)
G. 70 feet, 68 quarts (30%)

OBJECTIVE 2

1. J
2. C
3. A
4. G
5. I
6. D
7. E

OBJECTIVE 3

Answer should include the following in any order:

- **Water** – Used for the body's chemical reactions, to regulate body heat, and for use as a lubricant
- **Carbohydrates and Fats** – Primary function is to provide energy
- **Protein** – Composed of units called amino acids which are used as building blocks to develop body tissue
- **Vitamins** – Essential for normal body functions; serve as catalysts for reactions in the body tissue
- **Minerals** – Inorganic matter which aids in skeletal growth and chemical reactions

OBJECTIVE 4

Answer should include the following in any order:

- Growth
- Maintenance
- Fuel to maintain body temperature
- Energy for vital body functions
- Energy for work
- Production of milk
- Development of embryo
- Bone development

OBJECTIVE 5

1. V
2. C
3. P,M,V
4. M,V
5. C
6. M, V
7. P,M
8. P
9. P,V
10. P,M
11. P
12. M
13. P,M
14. C
15. V
16. V
17. V
18. V
19. V
20. V
21. C
22. C

OBJECTIVE 6

1, 4, 5, 6, 8, 10

OBJECTIVE 7

1. C
2. R
3. C
4. C
5. R
6. C
7. C
8. C

OBJECTIVE 8

1, 3, 4, 6, 8, 9

OBJECTIVE 9

1, 2, 3, 5, 6, 9, 10, 12, 14, 15

OBJECTIVE 10

Answer should include the following points:

- Reputation of the manufacturer
- Requirements of the horse
- Flexibility of commercial mixtures
- Analysis of tag
    - Brand
    - Net weight
    - Guaranteed analysis
    - Ingredients
    - Name, address, and phone number of the manufacturer

OBJECTIVE 11

Answer should include the following points:

- Feed horses individually.
- Clean feeders and waterers regularly.
- Clean feeding areas regularly.
- Always provide fresh, clean water.
- Avoid feeding hay on the ground.
- Feed at the same times every day.
- Introduce changes in the diet quantity or composition gradually.
- Consider the special requirements of particular horses when feeding.
- Store feed in rodent-proof bins.
- Do not overfeed or underfed.

- Allow for daily exercise to stimulate the appetite and promote good health.
- Have a deworming program and regularly inspect horses for health.
- Include salt in all rations.
- Feed vitamin and mineral supplements only as directed by product label.

OBJECTIVE 12 **Evaluated on Assignment Sheet 1.**

OBJECTIVE 13 **Evaluated on Assignment Sheet 2.**

CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) EQUINE MANAGEMENT AND PRODUCTION

UNIT NUMBER AND TITLE C1 – PRACTICAL HORSE NUTRITION

TOTAL NUMBER OF TEST QUESTIONS 93

TOTAL NUMBER OF BASIC SKILL QUESTIONS 51

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
1	A-G	S
2	1-7	S
3	1-5	S
4	1-7	X
5	1-22	S
6	1-10	X
7	1-8	X
8	1-10	X
9	1-15	X
10	1	W
11	1	W

INSTRUCTOR'S GUIDE

EQUINE GENETICS

D1

Required Activities and Resources (R)

These are fully integrated components of this CIMC curriculum. They are usually packaged in or with the curriculum and are essential in meeting the learning objectives. To individualize this unit, use the LAP Sheet supplied in your resources.

- Reproducible Handouts and Transparency Masters are included in the Instructor's Resource Package. Handouts should be copied for all students. Transparency Masters should be used to make overhead transparencies for using during instruction. A small copy of each Transparency Master appears in the student's Information Sheets.
- Non-reproducible resources are included in the student's curriculum.

Optional Activities and Resources (O)

These are suggested high-interest activities to help deliver learning objectives to students or to let students achieve objectives in an applied context. Select as many as you wish to use. Some activities use extra resources for further information about the unit content. You can make them available in the classroom for in-depth study or optional activities, but their use is not required for meeting CIMC unit objectives.

FOCUS ASSIGNMENTS

Prereading

R Have students read the Handout *The Perfect Horse.*

Writing

R Have the students write a short (one paragraph) discussion of how breeding does not guarantee a desired outcome. Have students include how the owners might use the horses in the cases.

GENERAL INSTRUCTIONS

Assignment Sheets

- R Review the directions and any specific guidelines.
- R Make certain that any needed materials from the Instructor's Resource Package are available.
- R Have the students complete the Assignment Sheet. Evaluate each student's performance and provide reteaching and retesting as necessary. Have the students repeat the Assignment Sheet until they achieve mastery.
- R Complete each student's Competency Profile.
- O Have the students volunteer to read aloud the directions and any special guidelines.
- O Return the completed Assignment Sheets to the students so that they may use them for later reference if needed.

Job Sheets

- R Review the Introduction and Evaluation Criteria for the Job Sheet. Remind the students that they should not fill in the blanks in the Yes/No columns.
- R Review and explain all general guidelines, safety cautions, and warnings.
- R Make sure that all tools, equipment, and supplies are available.
- R Demonstrate each of the procedures outlined in the Job Sheet.
- R Allow the students to practice the Job Sheet skills before skills testing. Coach, correct, and supervise as necessary.
- R Have the students complete the Job Sheet. Evaluate each student's performance and provide remediation as necessary. Have the students repeat the Job Sheet until they achieve mastery.
- R Complete each student's Competency Profile.
- R Return the completed Job Sheets to the students so that they may use them for later reference if needed.
- O Have the students volunteer to read aloud the job guidelines, cautions, and warnings.

LAP Sheets

The LAP Sheets are an optional component that can be used to individualize instruction. The following instructions should be followed only if you are using the LAP Sheets.

R Explain the specific procedures to be followed to the students before they begin using the LAP Sheet. Be sure that each student understands the procedures for using the LAP Sheet.

R If you want the student to complete any of the assignments on the LAP Sheet that are labeled optional, assign these to the student. Be sure to provide any needed resources.

OBJECTIVE 1

Describe fundamentals of heredity.

R Show the Transparency Master.

O Discuss the fundamentals of heredity. Refer to *Equine Genetics & Selection Procedures* for further information.

OBJECTIVE 2

State possible results of given matings.

O Provide students with other examples of possible matings such as Grey (G) and nongrey (g). Ask students to determine the possible results from the matings.

O Refer to *Equine Genetics & Selection Procedures* for further information.

OBJECTIVE 3

Analyze matings for desired breeding outcomes. (Assignment Sheet 1)

R See the general instructions for all Assignment Sheets.

OBJECTIVE 4

Match breeding systems to their correct definitions.

O Define breeding systems and discuss each. Provide students with examples of top performance horses and discuss their breeding.

O Refer to *Equine Genetics & Selection Procedures* for further information.

OBJECTIVE 5

Describe purposes of breeding systems.

O Discuss the purposes of breeding systems. Compare horse breeding to other livestock breeding such as cattle and examine the differences.

O Refer to *Equine Genetics & Selection Procedures* for further information.

OBJECTIVE 6

Evaluate breeding strategies. (Assignment Sheet 2)

R See the general instructions for all Assignment Sheets.

OBJECTIVE 7

Examine a pedigree. (Assignment Sheet 3)

R See the general instructions for all Assignment Sheets.

R Provide students with the handout *Reading a Pedigree.*

O Show students examples of several pedigrees.

EVALUATION

Pretest

- Use the unit Written Test for *both* the pretest and posttest. Give the students the pretest before they begin the unit.
- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving pretests and using the results. Information for ordering this material is included in the optional resources section.
- Use pretest results to guide individual students in progressing through the unit, doing enrichment work, or moving to the next unit.

Focus Assignment

- Use an informal evaluation of the focus assignments as a diagnostic tool for determining if any students need extra help in reading comprehension or writing skills. Refer these students to their English instructor, Learning Resource Center, or Educational Enhancement Center.

Assignment Sheet

- Evaluate students on Assignment Sheet activities. Students must repeat an Assignment Sheet until they have mastered the activity.

- Complete each student's Competency Profile.

Skill Test

- Explain to the students that they will be asked to demonstrate the procedures on the Job Sheets as a skills test.

- Describe the rating scale used on the skills test.

- Reteach and retest as necessary.

- Complete each student's Competency Profile.

Posttest

- After they have completed the unit, give students the Written Test again.

- Explain to the students that they will be asked to demonstrate on the Written Test actions listed in the specific objectives.

- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving posttests and using the results. Information for ordering this material is included in the optional resources section.

- Reteach and retest as necessary to meet individual student needs and state standards for student learning and competency gains.

- Complete the appropriate sections of the Competency Profiles.

- Review individual and group performance to evaluate teaching effectiveness. Adjust scope, sequence, or instructional methods for additional lessons as required.

REQUIRED RESOURCES

The items marked with an asterisk are included in the Instructor's Resource Package.

Publications

- *The Perfect Horse.* Handout 1.*
- *Reading a Pedigree.* Handout 2.*

OPTIONAL RESOURCES

Publications

- *Equine Genetics & Selection Procedures.* Tyler, Texas: Equine Research, Inc., 1978.
- Evans, J. Warren. *Horses: A Guide to Selection, Care, and Enjoyment,* (2nd ed.). New York: W.H. Freeman and Company, 1989.
- *Measuring Learning and Competency Gains: The Pretest/Posttest Approach.* Stillwater, OK: CIMC, Oklahoma Department of Vocational and Technical Education, 1992. For ordering information call 800-522-5810.

UNIT REFERENCES

Publications

- *Equine Genetics & Selection Procedures.* Tyler, Texas: Equine Research, Inc., 1978.
- *Equine Science.* College Station, Texas: Instructional Materials Service, Texas A&M University, 1990.
- Evans, J. Warren. *Horses: A Guide to Selection, Care, and Enjoyment,* (2nd ed.). New York: W.H. Freeman and Company, 1989.

ASSIGNMENT SHEETS

OBJECTIVE 3

Assignment Sheet 1

A. 100%
B. heterozygous
C. 50%
D. The breeder does not own a tobiano spotted stallion and would have to pay a stud fee. The purpose of the breeding is to introduce tobiano spotting into the breeder's herd.

OBJECTIVE 6

Assignment Sheet 2

1. No. Because the foal may not be worth as much as the stud fee.

2. Yes. The owner will be able to take advantage of the desirable characteristics of both breeds.

3. No. Closebreeding has a tendency to have detrimental affects on quantitative traits.

4. Yes. The owner has a good chance of increasing quantitative traits and the foal may demand a high price.

OBJECTIVE 7

Assignment Sheet 3

1. Thunder Bolt
2. Cinnamon
3. By A Nose
4. Bit of Luck
5. 25%
6. 12.5%
7. 50%
8. Snowflake and Sierra Star

WRITTEN TEST

OBJECTIVE 1

1. **chromosome** – Rod-like structures which exist in pairs, except in sex cells, and carry genes. A horse has 64 chromosomes in each cell which make up 32 pairs of chromosomes. The sperm and egg, sex cells or gametes, contain only one chromosome from each pair. The sex of offspring is determined by the sex chromosomes, known as the X and Y chromosomes. A horse with both an X and Y chromosome is a male and a horse with two X chromosomes is a female. The sperm and egg unite during conception to form a new horse that has 32 pairs of chromosomes (32 from the sperm plus 32 from the egg for a total of 64 chromosomes).

2. **gene** – Fundamental unit of genetics which determines all hereditary characteristics of animals.

3. **allele** – A form of a gene for a specific trait. A horse can carry only two alleles on a locus. If the two alleles are identical (BB), they are homozygous; if the two alleles are different, they are heterozygous.

4. **dominant** – An allele that covers up the expression of a corresponding recessive allele.

5. **recessive** – An allele whose trait is overridden by the corresponding dominant allele.

6. **genotype** – An individual's total genetic makeup; what can be passed on to offspring.

7. **phenotype** – Outward appearance; genotype plus environment.

8. **qualitative traits** – Traits controlled by one, or only a few, genes; definite distinction between phenotypes.

9. **quantitative traits** – Traits affected by many different genes.

OBJECTIVE 2

1.

	B	B
b	Bb	Bb
b	Bb	Bb

2.

	B	B
B	BB	BB
b	Bb	Bb

3.

	B	B
B	BB	BB
B	BB	BB

4.

	b	b
b	bb	bb
b	bb	bb

5.

	b	b
B	Bb	Bb
b	bb	bb

6.

	B	b
B	BB	Bb
b	Bb	bb

OBJECTIVE 3

Evaluated on Assignment Sheet 1.

OBJECTIVE 4

1. J
2. B
3. N
4. A
5. K
6. I
7. F
8. G
9. L

OBJECTIVE 5

1. **inbreeding** – Increases the chance of desirable characteristics being passed on to offspring
2. **closebreeding** – Produces foals which are exceptionally prepotent
3. **linebreeding** – To pass a large percentage of an outstanding ancestor's genes from generation to generation while minimizing the frequency of undesirable traits associated with inbreeding
4. **outbreeding** – Introduce a new gene type
5. **outcrossing** – Introduce new traits
6. **linecrossing** – Introduce desirable characteristics from one distinct family to another family
7. **grading** – Raise the quality of mare's offspring
8. **crossbreeding** – Capitalize on the desirable characteristics of two different breeds
9. **species hybridization** – Produce a distinct offspring

OBJECTIVE 6

Evaluated on Assignment Sheet 2.

OBJECTIVE 7

Evaluated on Assignment Sheet 3.

CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) EQUINE MANAGEMENT AND PRODUCTION

UNIT NUMBER AND TITLE D1 – EQUINE GENETICS

TOTAL NUMBER OF TEST QUESTIONS 34

TOTAL NUMBER OF BASIC SKILL QUESTIONS 33

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
1	1-9	S, W
2	1-6	S
3	Evaluated on AS 1	
4	1-9	S
5	1-9	S, W
6	Evaluated on AS 2	
7	Evaluated on AS 3	

Required Activities and Resources (R)

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FOCUS ASSIGNMENTS

Prereading

R Have the students read the Handout *Breeding of the Equine.*

Writing

R Have the students write a short (one paragraph) discussion of the different breeding methods. Have students include advantages and disadvantages.

GENERAL INSTRUCTIONS

Assignment Sheets

R Review the directions and any specific guidelines.

R Make certain that any needed materials from the Instructor's Resource Package are available.

R Have the students complete the Assignment Sheet. Evaluate each student's performance and provide reteaching and retesting as necessary. Have the students repeat the Assignment Sheet until they achieve mastery.

R Complete each student's Competency Profile.

O Have the students volunteer to read aloud the directions and any special guidelines.

O Return the completed Assignment Sheets to the students so that they may use them for later reference if needed.

Job Sheets

R Review the introduction and evaluation criteria for the Job Sheet. Remind the students that they should not fill in the blanks in the Yes/No columns.

R Review and explain all general guidelines, safety cautions, and warnings.

R Make sure that all tools, equipment, and supplies are available.

R Demonstrate each of the procedures outlined in the Job Sheet.

R Allow the students to practice the Job Sheet skills before skills testing. Coach, correct, and supervise as necessary.

R Have the students complete the Job Sheet. Evaluate each student's performance and provide remediation as necessary. Have the students repeat the Job Sheet until they achieve mastery.

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R Return the completed Job Sheets to the students so that they may use them for later reference if needed.

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OBJECTIVE 1 **List conditions in male reproductive system that cause infertility.**

- O Review the male reproductive system. Refer to Unit B1 "Horse Health and Disease Prevention."
- O Discuss conditions in male reproductive system that cause infertility.
- O Refer to the book *Breeding Management & Foal Development* for further information.

OBJECTIVE 2 **Select from a list factors to consider in keeping a stallion in breeding fitness.**

- O Discuss keeping a stallion in breeding fitness. Emphasize that stallions are a major investment and their ability or inability to reproduce can affect the financial aspects of a breeding operation.
- O Refer to the book *Breeding Management & Foal Development* for further information.

OBJECTIVE 3 **Describe the influences of hormones.**

- O Discuss the influences of hormones.

OBJECTIVE 4 **Describe breeding season behavior of stallions.**

- Discuss breeding season behavior of stallions. Emphasize that safety must always be considered when handling stallions and that stallion behavior can be unpredictable. Stress that stallions should only be handled by experienced persons.

- Refer to the book *Breeding Management & Foal Development* for further information.

OBJECTIVE 5 **Describe methods of semen collection.**

- Discuss the advantages and disadvantages of the different collection methods.

- Refer to the book *Breeding Management & Foal Development* for further information.

OBJECTIVE 6 **List precautions to take when handling collected semen.**

- Discuss precautions to take when handling semen. Emphasize that improper handling may damage the sperm and affect the analysis.

- Refer to the book *Breeding Management & Foal Development* for further information.

OBJECTIVE 7 **Label sperm cell abnormalities.**

- Discuss sperm cell abnormalities. State that abnormal sperm does not affect the normal sperm.

- Refer to the book *Breeding Management & Foal Development* for further information.

OBJECTIVE 8 **Describe components of semen evaluation.**

- Discuss why each component is important in evaluating semen.

- Show students sample laboratory reports of semen evaluation and discuss the reports.

- Refer to the book *Breeding Management & Foal Development* for further information.

OBJECTIVE 9

List reasons for adding extender to semen.

O Discuss adding extender to semen. Show students samples of extenders. Discuss the ingredients of extenders and why they help to extend semen.

OBJECTIVE 10

Arrange in order the steps in breeding season hygiene for a stallion.

O Discuss breeding season hygiene. Emphasize the importance of proper hygiene during breeding season.

OBJECTIVE 11

Explain methods and procedures of breeding.

R Start the discussion by asking students, "What do you think are the advantages and disadvantages of each breeding method?"

O Visit a breeding farm in your area. Obtain prior approval before visiting any breeding farm.

O Refer to the book *Breeding Management & Foal Development* for further information.

OBJECTIVE 12

Arrange in order the steps in hand mating.

O Discuss the steps in hand mating. Emphasize that safety must always be considered and that the handlers should be experienced.

OBJECTIVE 13

Describe preparation of artificial vagina for collection.

O Show students a sample artificial vagina. Have students prepare an artificial vagina.

OBJECTIVE 14

Describe preparation of stallion for collection.

O Discuss preparation of the stallion for collection. Emphasize that safety must always be considered when handling stallions.

OBJECTIVE 15

Explain collecting semen with artificial vagina.

O Discuss collecting semen with an artificial vagina.

O Refer to the book *Breeding Management & Foal Development* for further information.

OBJECTIVE 16

Analyze lab results from a stallion's semen sample. (Assignment Sheet 1)

R See the general instructions for all Assignment Sheets.

O Have students examine a semen sample under a microscope. The equipment and materials needed are collected semen, graduated cylinder, pipette, microscope, slides and covers, and 2% sodium citrate. Follow the procedure below for examining the semen:

1. Remove the collection of semen from the artificial vagina and strain the semen if a filter was not used. (Triple thickness of cheese cloth is good to use as a strainer.)

2. Prewarm the graduated cylinder to 100° F (38 1/4° C).

3. Place semen in a graduated cylinder by holding the cylinder at a 45° angle and pouring down the side.

4. Make a visual appraisal for volume, color, and consistency.

5. Use a prewarmed pipette to place a single drop of 2% sodium citrate and one drop of raw semen on one end of slide; repeat the process at the other end.

6. Cover each drop with a cover slip so air bubbles will not become trapped under the cover slip.

7. Place the slide under the microscope and view the sperm under 200 magnifications.

   ☑ **NOTE:** When lowering the objective, be certain it does not push the cover slip against the slide.

8. Observe 3-5 fields per cover slip.

   ☑ **NOTE:** Observe fields near the center of the drops since drying occurs rapidly around the edges.

9. Estimate motility.

10. Estimate the number of abnormal cells.

EVALUATION

Pretest

- Use the unit Written Test for *both* the pretest and posttest. Give the students the pretest before they begin the unit.

- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving pretests and using the results. Information for ordering this material is included in the optional resources section.

- Use pretest results to guide individual students in progressing through the unit, doing enrichment work, or moving to the next unit.

Focus Assignment

- Use an informal evaluation of the focus assignments as a diagnostic tool for determining if any students need extra help in reading comprehension or writing skills. Refer these students to their English instructor, Learning Resource Center, or Educational Enhancement Center.

Assignment Sheet

- Evaluate students on Assignment Sheet activities. Students must repeat an Assignment Sheet until they have mastered the activity.

- Complete each student's Competency Profile.

Skill Test

- Explain to the students that they will be asked to demonstrate the procedures on the Job Sheets as a skills test.

- Describe the rating scale used on the skills test.

- Reteach and retest as necessary.

- Complete each student's Competency Profile.

Posttest

- After they have completed the unit, give students the Written Test again.
- Explain to the students that they will be asked to demonstrate on the Written Test actions listed in the specific objectives.
- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving posttests and using the results. Information for ordering this material is included in the optional resources section.
- Reteach and retest as necessary to meet individual student needs and state standards for student learning and competency gains.
- Complete the appropriate sections of the Competency Profiles.
- Review individual and group performance to evaluate teaching effectiveness. Adjust scope, sequence, or instructional methods for additional lessons as required.

REQUIRED RESOURCES

The items marked with an asterisk are included in the Instructor's Resource Package.

Publications

- *Breeding Methods of the Equine.* Handout.*

OPTIONAL RESOURCES

Publications

- *Breeding Management & Foal Development.* Tyler, TX: Equine Research, Inc., 1982.
- Giffin, James M. and Tom Gore. *Horse Owner's Veterinary Handbook.* New York: Howell Book House, 1989.
- *Measuring Learning and Competency Gains: The Pretest/Posttest Approach.* Stillwater, OK: CIMC, Oklahoma Department of Vocational and Technical Education, 1992. For ordering information call 800-522-5810.

UNIT REFERENCES

Publications

- *Breeding Management & Foal Development.* Tyler, TX: Equine Research, Inc., 1982.
- Evans, J. Warren. *Horses: A Guide to Selection, Care, and Enjoyment.* New York: W.H. Freeman and Company, 1989.
- Giffin, James M. and Tom Gore. *Horse Owner's Veterinary Handbook.* New York: Howell Book House, 1989.
- *Teasing and Insemination Methods for Breeding Mares.* OSU Extension Facts No. 9117. Stillwater, OK: Oklahoma State University Cooperative Extension Service, 1990.

ASSIGNMENT SHEETS

OBJECTIVE 16

Assignment Sheet

1. None

2. Yes, because all of the parameters fall within the normal ranges.

WRITTEN TEST

OBJECTIVE 1

Answer should include the following in any order:

- Poor semen quality
- Impotency
- Infectious organisms
- Abnormalities of the reproductive system
- Nutritional deficiency
- Age
- Lack of exercise
- Drugs

OBJECTIVE 2

1, 3, 4, 5, 7, 9, 10

OBJECTIVE 3

1. Follicle Stimulating Hormone (FSH) – Thought to be responsible for spermatogenesis in the seminiferous tubule of the testis.
2. Luteinizing Hormone (LH) – Stimulation of specialized cells in the testicles to produce androgens, one of which is testosterone.
3. Testosterone – Regulates masculine characteristics and accessory glands; development of secondary sex characteristics; behavioral characteristics; spermatogenesis.

OBJECTIVE 4

Answer should include the following points:

- When around a mare in heat, a stallion will usually have instinctive interest. The stallion may prance around the mare, holding his head in an alert manner. The stallion may also snort, smell the mare's genitals, and nip at the mare around the neck. When he smells, his upper lip will often curl back (the Flehman response).
- Some stallions have vices which become more pronounced during breeding season. This may include reacting aggressively toward handlers or mares.
- Libido is important in the breeding season behavior of stallions. Stallions which have been previously punished for displaying sexual activity may be hesitant to breed. Older or overused stallions may also have decreased sexual drive.
- Stallion behavior is sometimes unpredictable. Stallions must be handled by competent handlers. Safety must always be considered when around stallions. Safety considerations become even more important because of possible injury to the handlers, the stallion, or the mares.

OBJECTIVE 5

Answer should include the following in any order:

- Artificial vagina – device with a leather covering and rubber inner lining to be filled with water to regulate temperature and pressure
- Condom – Large rubber device used to cover the penis and collect semen during copulation
- Dismount sample (drag) – collection of the remainder of semen during dismount

OBJECTIVE 6

Answer should include the following in any order:

- Protect the sample from exposure to light.
- Collect semen in sterile container.
- Do NOT subject the sample to excessive movement.
- Keep the sample in a stable temperature environment.
- Analyze the sample as soon as possible.
- If extender is to be used, make sure it is warmed to the appropriate temperature.

OBJECTIVE 7

1. bent tail
2. short tail
3. coiled
4. crooked tail
5. tailless
6. small head
7. headless
8. giant head
9. shoehook
10. bent
11. normal
12. immature
13. twin tail
14. twin head

OBJECTIVE 8

Answer should include the following:

1. Volume of ejaculate – usually 50 to 150 ml for a light breed stallion

2. Visual appraisal – color of semen should be slightly cloudy and with the consistency of mineral oil; free of blood and foreign matter.

3. Microscopic examination – used to determine the number of live spermatozoa, the amount and rate of movement, and the number of abnormal spermatozoa

   a. Progressive motility – Number of spermatozoa moving; usually 60-100%; sperm should move swiftly forward, preferably in a straight line.

   b. Rate of motility – amount of movement of the spermatozoa

   c. Live-dead percentage – indicates the ability of the testes to produce viable sperm; sample semen should contain at least 60% live sperm.

   d. Concentration – number of sperm cells per ml of semen; normal range is 30-600 million per ml of semen.

   e. Morphology (abnormal sperm count) – sample of semen should contain at least 65% normal sperm.

   f. pH – indicates the acidity or alkalinity of the semen; semen that is high in alkaline may have been contaminated by urine and shifts in the alkaline may indicate reproductive tract infections or other disorders; normal pH range is 6.9-7.8

   g. Longevity – sperm cells with a short longevity may affect the reproductive capabilities of the stallion.

   h. Blood cells – Some red blood cells may be observed in the semen under the microscope but unless more than 500 red blood cells/mm^3 are counted, it should not be a concern. A white blood cell count should be taken if semen is alkaline (excess 7.8) with no indication of urine. A white blood cell count of more than 1500 per mm^3 may indicate an infection.

OBJECTIVE 9

Answer should include the following in any order:

- Extends the life of the sperm
- Controls infections that are present in the semen, if extenders contain antibiotics or antibacterial agents
- Increases volume
- Helps immobilize semen
- Buffers the uterine environment of mare

OBJECTIVE 10

5, 1, 3, 4, 7, 6, 2

OBJECTIVE 11

Answer should include the following in any order:

- Hand breeding – The stallion and mare are handled by individual handlers during the breeding process.
- Pasture breeding – The stallion is placed in pasture with band of mares.
- Artificial insemination – Semen is collected from a stallion and placed in the reproductive tract of a mare.

OBJECTIVE 12

11, 10, 12, 8, 1, 3, 2, 4, 5, 7, 6, 9

OBJECTIVE 13

Answer should include the following points:

1. Follow the instructions to assemble the artificial vagina.
2. Lubricate the first three-fourths of the artificial vagina up to the triangle with sterile lubricant.
3. Fill the outer jacket of the artificial vagina one-half to two-thirds with water.
4. Attach the leather jacket.
5. Temperature should be maintained between 116°-118° F (44°-48°C).
6. Take the artificial vagina directly to the prepared stallion or store in warming oven.

OBJECTIVE 14

Answer should include the following points:

1. Allow the stallion to tease the mare at the teasing rail until an erection is attained.
2. Instruct the handler to restrain from near side (left side) of horse.
3. Stand on the near side of the horse also, grasping penis firmly, but gently.
4. Wash the penis thoroughly but gently.
5. Rinse, making sure all soap is removed.

OBJECTIVE 15

Answer should include the following points:

1. Instruct the handler to follow the procedure as if you were hand mating.
2. Direct the stallion's penis into the artificial vagina once he mounts the mare or breeding dummy.
3. Hold the artificial vagina horizontal to the underline of the mare or breeding dummy.
4. Place the right hand on the base of the penis during intermission and thrusting to feel the pulsations of ejaculation.
5. Lower the end of the artificial vagina with the collection tube to allow semen to collect in the designated area.
6. Take semen to the laboratory immediately.

OBJECTIVE 16

Evaluated on the Assignment Sheet.

CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) EQUINE MANAGEMENT AND PRODUCTION

UNIT NUMBER AND TITLE D2 – STALLION

TOTAL NUMBER OF TEST QUESTIONS 73

TOTAL NUMBER OF BASIC SKILL QUESTIONS 35

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
1	1-8	S
2	1-10	X
3	1-3	S, W
4	1	W
5	1-3	X
6	1-6	X
7	1-14	S
8	1	S, W
9	1-5	S
10	1-7	X
11	1-3	X
12	1-12	X
13	1	W
14	1	W
15	1	W
16	Evaluated on the AS	

INSTRUCTOR'S GUIDE

MARE

D3

Required Activities and Resources (R)

These are fully integrated components of this CIMC curriculum. They are usually packaged in or with the curriculum and are essential in meeting the learning objectives. To individualize this unit, use the LAP Sheet supplied in your resources.

- Reproducible Handouts and Transparency Masters are included in the Instructor's Resource Package. Handouts should be copied for all students. Transparency Masters should be used to make overhead transparencies for using during instruction. A small copy of each Transparency Master appears in the student's Information Sheets.

- Non-reproducible resources are included in the student's curriculum.

Optional Activities and Resources (O)

These are suggested high-interest activities to help deliver learning objectives to students or to let students achieve objectives in an applied context. Select as many as you wish to use. Some activities use extra resources for further information about the unit content. You can make them available in the classroom for in-depth study or optional activities, but their use is not required for meeting CIMC unit objectives.

FOCUS ASSIGNMENTS

Prereading

R Have the students read the Handout *Broodmares.*

Writing

R Have the students write a short discussion of the expense and care involved in having brood mares.

GENERAL INSTRUCTIONS

Assignment Sheets

R Review the directions and any specific guidelines.

R Make certain that any needed materials from the Instructor's Resource Package are available.

R Have the students complete the Assignment Sheet. Evaluate each student's performance and provide reteaching and retesting as necessary. Have the students repeat the Assignment Sheet until they achieve mastery.

R Complete each student's Competency Profile.

O Have the students volunteer to read aloud the directions and any special guidelines.

O Return the completed Assignment Sheets to the students so that they may use them for later reference if needed.

Job Sheets

R Review the Introduction and Evaluation Criteria for the Job Sheet. Remind the students that they should not fill in the blanks in the Yes/No columns.

R Review and explain all general guidelines, safety cautions, and warnings.

R Make sure that all tools, equipment, and supplies are available.

R Demonstrate each of the procedures outlined in the Job Sheet.

R Allow the students to practice the Job Sheet skills before skills testing. Coach, correct, and supervise as necessary.

R Have the students complete the Job Sheet. Evaluate each student's performance and provide remediation as necessary. Have the students repeat the Job Sheet until they achieve mastery.

R Complete each student's Competency Profile.

R Return the completed Job Sheet to the students so that they may use them for later reference if needed.

O Have the students volunteer to read aloud the job guidelines, cautions, and warnings.

LAP Sheets

The LAP Sheets are an optional component that can be used to individualize instruction. The following instructions should be followed only if you are using the LAP Sheets.

- **R** Explain the specific procedures to be followed to the students before they begin using the LAP Sheet. Be sure that each student understands the procedures for using the LAP Sheet.

- **R** If you want the student to complete any of the assignments on the LAP Sheet that are labeled optional, assign these to the student. Be sure to provide any needed resources.

OBJECTIVE 1

List conditions in the female reproductive system that cause infertility.

- **O** For further information refer to *Breeding Management and Foal Development*, *Horses: A Guide to Selection, Care, and Enjoyment*, or *Blessed are the Brood Mares.*

OBJECTIVE 2

Describe the mare's reproductive cycle.

- **R** Show the Transparency Master to illustrate the mare's estrous cycle.

- **O** For further information refer to *Breeding Management and Foal Development* or *Horses: A Guide to Selection, Care, and Enjoyment.*

- **O** Obtain the OSU Extension Fact Sheet No. 3974 *Reproductive Management of the Mare* and make it available for students to read.

OBJECTIVE 3

Describe the influences of hormones.

- **O** For further information refer to *Breeding Management and Foal Development* or *Horses: A Guide to Selection, Care, and Enjoyment.*

OBJECTIVE 4

Select from a list signs of estrus in the mare.

- **O** For further information refer to *Breeding Management and Foal Development* or *Horses: A Guide to Selection, Care, and Enjoyment.*

- **O** Give students examples of mare behavior and ask them if the behavior would indicate estrus.

OBJECTIVE 5

List in order breeding season hygiene for mares.

O For further information refer to *Breeding Management and Foal Development* or *Horses: A Guide to Selection, Care, and Enjoyment.*

OBJECTIVE 6

Describe normal breeding characteristics of mares.

O For further information refer to *Breeding Management and Foal Development* or *Horses: A Guide to Selection, Care, and Enjoyment.*

OBJECTIVE 7

Select from a list management practices to consider in teasing mares.

O For further information refer to *Breeding Management and Foal Development, Horses: A Guide to Selection, Care, and Enjoyment* or *Blessed are the Broodmares.*

O Obtain the OSU Fact Sheet No. 9117 *Teasing and Insemination Methods for Breeding Mares,* and make available for students to read.

OBJECTIVE 8

Select from a list items to be included in record keeping during breeding season.

O For further information refer to *Breeding Management and Foal Development* or *Horses: A Guide to Selection, Care, and Enjoyment.*

O Show students samples of breeding records.

OBJECTIVE 9

Interpret record keeping data on mares. (Assignment Sheet 1)

R See the general instructions for all Assignment Sheets.

O Explain that breeding farms will have different ways of recording teasing information. Show students examples of other scoring systems.

OBJECTIVE 10

List ways to detect pregnancy.

O For further information refer to *Breeding Management and Foal Development* or *Horses: A Guide to Selection, Care, and Enjoyment.*

OBJECTIVE 11

List important items relating to care of mare and foal during gestation.

- For further information refer to *Breeding Management and Foal Development, Horses: A Guide to Selection, Care, and Enjoyment*, or *Blessed are the Brood Mares.*

OBJECTIVE 12

List noninfectious causes of abortion.

- For further information refer to *Breeding Management and Foal Development* or *Horses: A Guide to Selection, Care, and Enjoyment.*
- Emphasize the importance of proper care to prevent abortion.

OBJECTIVE 13

Match infectious causes of abortion to the correct descriptions.

- For further information refer to *Breeding Management and Foal Development.*

OBJECTIVE 14

Select from a list measures to take to prevent abortion.

- For further information refer to *Breeding Management and Foal Development* or *Horses: A Guide to Selection, Care, and Enjoyment.*
- Emphasize the importance of proper care to prevent abortion.

OBJECTIVE 15

Discuss the use of cultures and biopsies in the mare.

- For further information refer to *Breeding Management and Foal Development.*

OBJECTIVE 16

Describe the use of new technologies in reproductive management of the mare.

- For further information refer to *Breeding Management and Foal Development.*

OBJECTIVE 17

Develop a plan of care for a pregnant mare. (Assignment Sheet 2)

R See the general instructions for all Assignment Sheets.

EVALUATION

Pretest

- Use the unit Written Test for *both* the pretest and posttest. Give the students the pretest before they begin the unit.

- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving pretests and using the results. Information for ordering this material is included in the optional resources section.

- Use pretest results to guide individual students in progressing through the unit, doing enrichment work, or moving to the next unit.

Focus Assignment

- Use an informal evaluation of the focus assignments as a diagnostic tool for determining if any students need extra help in reading comprehension or writing skills. Refer these students to their English instructor, Learning Resource Center, or Educational Enhancement Center.

Assignment Sheet

- Evaluate students on Assignment Sheet activities. Students must repeat an Assignment Sheet until they have mastered the activity.

- Complete each student's Competency Profile.

Skill Test

- Explain to the students that they will be asked to demonstrate the procedures on the Job Sheets as a skills test.

- Describe the rating scale used on the skills test.

- Reteach and retest as necessary.

- Complete each student's Competency Profile.

Posttest

- After they have completed the unit, give students the Written Test again.
- Explain to the students that they will be asked to demonstrate on the Written Test actions listed in the specific objectives.
- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving posttests and using the results. Information for ordering this material is included in the optional resources section.
- Reteach and retest as necessary to meet individual student needs and state standards for student learning and competency gains.
- Complete the appropriate sections of the Competency Profiles.
- Review individual and group performance to evaluate teaching effectiveness. Adjust scope, sequence, or instructional methods for additional lessons as required.

REQUIRED RESOURCES

The items marked with an asterisk are included in the Instructor's Resource Package.

Publications

- *Broodmares*. Handout.*

OPTIONAL RESOURCES

Publications

- *Breeding Management and Foal Development*. Tyler, Texas: Equine Research, Inc., 1982.
- Evans, J. Warren. *Horses: A Guide to Selection, Care, and Enjoyment, (2nd ed.)*. New York: W.H. Freeman and Company, 1989.
- Lose, M. Phyllis. *Blessed are the Brood Mares*. New York: Howell Book House, 1991.

- *Measuring Learning and Competency Gains: The Pretest/Posttest Approach.* Stillwater, OK: CIMC, Oklahoma Department of Vocational and Technical Education, 1992. For ordering information call 800-522-5810.
- *Reproductive Management of the Mare.* OSU Extension Facts No. 3974. Stillwater, Oklahoma: Oklahoma State University Cooperative Extension Service.
- *Teasing and Insemination Methods for Breeding Mares.* OSU Extension Facts No. 9117. Stillwater, Oklahoma: Oklahoma State University Cooperative Extension Service.

Videos

- *Reproductive Management of Mares.* Stillwater, OK: Oklahoma State University Cooperative Extension Service.

☑ **NOTE:** For information on this video contact your local Oklahoma County Extension office.

UNIT REFERENCES

Publications

- *Breeding Management and Foal Development.* Tyler, Texas: Equine Research, Inc., 1982.
- Evans, J. Warren. *Horses: A Guide to Selection, Care, and Enjoyment, (2nd ed.).* New York: W.H. Freeman and Company, 1989.
- Lose, M. Phyllis. *Blessed are the Brood Mares.* New York: Howell Book House, 1991.
- *Measuring Learning and Competency Gains: The Pretest/Posttest Approach.* Stillwater, OK: CIMC, Oklahoma Department of Vocational and Technical Education, 1992. For ordering information call 800-522-5810.
- *Reproductive Management of the Mare.* OSU Extension Facts No. 3974. Stillwater, Oklahoma: Oklahoma State University Cooperative Extension Service.
- *Teasing and Insemination Methods for Breeding Mares.* OSU Extension Facts No. 9117. Stillwater, Oklahoma: Oklahoma State University Cooperative Extension Service.

ASSIGNMENT SHEETS

OBJECTIVE 9

Assignment Sheet 1

1. 1
2. Sunset and Star should be palpated to determine reproductive status. Breeze does not show obvious signs of estrus so she should not be palpated.
3. The mare is not in estrus and should not be bred at this time. The owner should wait until the mare is in estrus and has been checked by a veterinarian to determine reproductive status.

OBJECTIVE 17

Assignment Sheet 2

Student answers will vary. Students should develop a plan of care for a pregnant mare including such items as nutrition, facilities, veterinarian, etc. Review information in objectives 11 and 14 for areas that should be covered in the plan.

WRITTEN TEST

OBJECTIVE 1

Answer should include the following in any order:

- Abnormalities of the female reproductive tract
- Rectal vaginal fistula (rupture of the vaginal wall between the vagina and the rectum)
- Neoplasms (tumors)
- Nonfunctioning or malfunctioning ovaries
- Uterine infection

- Nutritional deficiency
- Old age
- Obesity (too fat)
- Drugs
- Excessive stress
- Hormone problems

OBJECTIVE 2

Answer should include points from the following:

- Mares are seasonal polyestrous breeders; the mare's reproductive cycle is affected by the length of daylight hours, nutrition, temperature, and environmental factors. (Figure 1)
- Anestrus is the period when the mare shows no signs of reproductive activity. Anestrus begins in the early fall and ends around March.

ESTROUS CYCLE

FOLLICULAR STAGE (Proestrus and Estrus)

- *Proestrus* is the period just before estrus that lasts about two days and is characterized by a steady rise in estrogen levels.
    - ☐ There is a gradual change in the mare's behavior as she becomes more receptive to the stallion.
    - ☐ Preliminary follicle growth also occurs during proestrus.
- *Estrus* is the period when the mare is in heat. During estrus the mare's behavior changes and she becomes receptive to the stallion. Estrus usually lasts from four to six days.
    - ☐ The follicle matures and the ovum gradually releases from the follicle during ovulation.
    - ☐ Ovulation usually occurs 24-48 hours before the end of estrus. Ovulation marks the transition from the follicular stage to the luteal stage.

LUTEAL STAGE (Metestrus and Diestrus)

- *Metestrus* occurs before diestrus and lasts approximately two days. It is characterized by formation of the corpus luteum and increasing levels of progesterone.
  - ☐ Behaviorally the mare is beginning to resist the stallion.
- *Diestrus* is a 12-13 day period in which the corpus luteum is fully functional.
  - ☐ If the ovum becomes fertilized and produces a viable embryo, the mare's uterus recognizes the pregnancy and the corpus luteum remains functional supporting the pregnancy with progesterone until the placenta starts production of pregnant mare serum gonadotropin (PMSG) which is a progesterone-like hormone.
  - ☐ If the mare does not become pregnant the uterus produces prostaglandins which will cause the corpus luteum to regress and a new estrous cycle will begin. The progesterone drops, estrogen levels increase, and the cycle starts over again.
  - ☐ The mare is not responsive to the stallion during the diestrus.

OBJECTIVE 3

1. **Follicle Stimulating Hormone (FSH)** – Stimulates the ovary to secrete estrogen; primarily responsible for follicular development
2. **Estrogen** – Produces behavioral signs of estrus (heat) and is needed to develop follicle in the ovary.
3. **Luteinizing Hormone (LH)** – Causes ovulation and formation of corpus luteum
4. **Progesterone** – Produced by corpus luteum; primary hormone that is responsible for the recognition and maintenance of early pregnancy up to about 150 days; called the "pregnancy hormone"; one function of progesterone is to prepare the lining of the uterus to receive and support the fertilized ovum.
5. **Prostaglandin** – Causes regression and disappearance of the corpus luteum

OBJECTIVE 4

1, 2, 4, 6, 8, 9, 11, 12

OBJECTIVE 5

Answer should include the following points in the order listed below:

1. Wrap the upper one-third of the mare's tail with clean wrap or use palpation sleeve.
2. Wash external labia with mild soap and warm water, making sure to clean all areas which the stallion's penis will or may contact. Wash from the inside out.
3. Rinse thoroughly to remove all remaining soap particles.
4. Dry genital area in preparation for breeding.
5. Remove tail wrap or palpation sleeve after breeding.

OBJECTIVE 6

1. **Age of puberty** – between 10 and 24 months of age; 18 months is average
2. **Age to breed mares** – not earlier than three years of age
3. **Gestation period** – time from conception until parturition; average is approximately 340 days, with a normal range from 325-350 days
4. **Foal heat** – mares usually show signs of estrus 9-11 days after foaling, may vary 3-13 days

OBJECTIVE 7

1, 4, 6, 8, 9, 11

OBJECTIVE 8

1, 4, 5, 7, 8, 9, 10, 11, 12

OBJECTIVE 9

Evaluated on Assignment Sheet 1.

OBJECTIVE 10

Answer should include the following in any order:

- Cessation of heat period
- Rectal palpation
- Laboratory tests

- Movement of live fetus
- Enlargement of mare's stomach and flank area
- Ultrasound

OBJECTIVE 11

Answer should include the following in any order:

- Nutrition
- Exercise
- Vaccinations
- Facilities
- Deworming

OBJECTIVE 12

Answer should include the following in any order:

- Malnutrition
- Ingestion of toxic materials
- Fatigue or stress
- Injury or trauma
- Heredity
- Twinning
- Physiological causes
- Genetic anomalies

OBJECTIVE 13

1. G
2. B
3. D
4. F
5. H
6. A

OBJECTIVE 14

1, 3, 4, 6, 7, 9, 11, 12, 13, 15

OBJECTIVE 15

Answer should include the following points:

- Cultures can be used if a reproductive infection is suspected; the culture can be used to help identify pathogens and identify the most effective treatment.
- Uterine biopsies can be used as a tool for equine fertility evaluation.

OBJECTIVE 16

Answer should include the following points:

- Laser surgery is used to correct reproductive problems.
- Embryo transfer – The egg from one mare is placed in the uterus of a recipient mare.
- Estrus synchronization – The donor mare and the recipient mare for an embryo transfer need to be within 24 hours of the same stage of estrus at the time of embryo transfer; usually achieved through the use of prostaglandin.

OBJECTIVE 17

Evaluated on Assignment Sheet 2.

CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) EQUINE MANAGEMENT AND PRODUCTION

UNIT NUMBER AND TITLE D3 – MARE

TOTAL NUMBER OF TEST QUESTIONS 90

TOTAL NUMBER OF BASIC SKILL QUESTIONS 40

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
1	1-11	S
2	1	S, W
3	1-5	S
4	1-12	S
5	1	W
6	1-4	X
7	1-11	X
8	1-12	X
9	Evaluated on AS 1	
10	1	W
11	1	W
12	1-8	X
13	1-6	S
14	1-15	X
15	1	W
16	1	W
17	Evaluated on AS 2	

INSTRUCTOR'S GUIDE

PARTURITION

D4

Required Activities and Resources (R)

These are fully integrated components of this CIMC curriculum. They are usually packaged in or with the curriculum and are essential in meeting the learning objectives. To individualize this unit, use the LAP Sheet supplied in your resources.

- Reproducible Handouts and Transparency Masters are included in the Instructor's Resource Package. Handouts should be copied for all students. Transparency Masters should be used to make overhead transparencies for use during instruction. A small copy of each Transparency Master appears in the student's Information Sheets.
- Non-reproducible resources are included in the student's curriculum.

Optional Activities and Resources (O)

These are suggested high-interest activities to help deliver learning objectives to students or to let students achieve objectives in an applied context. Select as many as you wish to use. Some activities use extra resources for further information about unit content. You can make them available in the classroom for in-depth study or optional activities, but their use is not required for meeting CIMC unit objectives.

FOCUS ASSIGNMENTS

Prereading

R Have the students read the Handout *A Foal of Your Own.*

Writing

R Have the students write a short discussion of the actions the owner took to aid in parturition.

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GENERAL INSTRUCTIONS

Assignment Sheets

R Review the directions and any specific guidelines.

R Make certain that any needed materials from the Instructor's Resource Package are available.

R Have the students complete the Assignment Sheet. Evaluate each student's performance and provide reteaching and retesting as necessary. Have the students repeat the Assignment Sheet until they achieve mastery.

R Complete each student's Competency Profile.

O Have the students volunteer to read aloud the directions and any special guidelines.

O Return the completed Assignment Sheets to the students so that they may use them for later reference if needed.

Job Sheets

R Review the introduction and evaluation criteria for the Job Sheet. Remind the students that they should not fill in the blanks in the Yes/No columns.

R Review and explain all general guidelines, safety cautions, and warnings.

R Make sure that all tools, equipment, and supplies are available.

R Demonstrate each of the procedures outlined in the Job Sheet.

R Allow the students to practice the Job Sheet skills before skills testing. Coach, correct, and supervise as necessary.

R Have the students complete the Job Sheet. Evaluate each student's performance and provide remediation as necessary. Have the students repeat the Job Sheet until they achieve mastery.

R Complete each student's Competency Profile.

R Return the completed Job Sheets to the students so that they may use them for later reference if needed.

O Have the students volunteer to read aloud the job guidelines, cautions, and warnings.

LAP Sheets

The LAP Sheets are an optional component that can be used to individualize instruction. The following instructions should be followed only if you are using the LAP Sheets.

R Explain the specific procedures to be followed to the students before they begin using the LAP Sheet. Be sure that each student understands the procedures for using the LAP Sheet.

R If you want the student to complete any of the assignments on the LAP Sheet that are labeled optional, assign these to the student. Be sure to provide any needed resources.

OBJECTIVE 1

Discuss steps to take in preparation for foaling.

R Show the appropriate sections from the video *Foaling Fundamentals: A Video Handbook for Healthy Foaling.*

R Discuss the steps to take in preparation for foaling. Students should write the information given below in their Information Sheet.

- Mare should be checked regularly by veterinarian during her pregnancy.
- Mare should receive killed rhinopneumonitis at 9-7-5-3 months prior to due date.
- At 30 days prior to the due date, the mare should receive annual shots.
- Mare should be on a regular deworming schedule, receiving deworming no less than 30 days prior to due date.
- Ensure fencing and walls of foaling area are solid down to the ground.
- Pull mares shoes at one month prior to due date.
- Clean foaling stall thoroughly.

- Groom the mare daily; check her condition and manipulate the nipples.
- Prepare foaling kit.
- Keep accurate records of breeding dates.

O Refer to *Breeding Management and Foal Development* or *Fundamentals of Breeding, Volume 1* for further information.

OBJECTIVE 2

List items to include in a foaling kit.

R Show the appropriate sections from the video *Foaling Fundamentals: A Video Handbook for Healthy Foaling.*

R Discuss the items to include in a foaling kit. Students should write the information given below in their Information Sheet.

- Flashlight
- Watch
- Pad and pen
- Sterile cotton
- Bucket with lid
- Sponge
- Ivory liquid
- Athletic bandage
- Towels
- Latex gloves
- Betadine with hemostat, plastic lidded bowl, spray bottle or prescription bottle
- Fleet baby enema
- Vaseline

- Halter, chain shank and twitch
- Goat nipple and bottle
- Foal halter

O Show students examples of the items to include in a foaling kit. Assemble a foaling kit and leave out for students to examine.

O Refer to *Breeding Management and Foal Development* or *Fundamentals of Breeding, Volume 1* for further information.

OBJECTIVE 3 **List essential characteristics of individual offering assistance in foaling process.**

O Ask students why they think the characteristics are important.

OBJECTIVE 4 **List indications of approaching parturition.**

R Show the appropriate sections from the video *Foaling Fundamentals: A Video Handbook for Healthy Foaling.*

R Discuss the indications of approaching parturition. Students should write the information given below in their Information Sheet.

ONE MONTH

- Hind end softens.
- Mammary glands enlarge; mare will bag up.

ONE WEEK

- Abdomen becomes more pendulous.
- Milk veins are apparent.
- Hind legs retain water.
- Mare is not very social.
- Mare will have trouble finding a comfortable standing position.

- Vulva will be enlarged 3-4 times its normal size.
- Hind end becomes extremely jelly-like.
- Bag is large and nipples are full and round.

12-48 HOURS

- Wax-like substance forms on end of nipples.
- Tail is loose and can't clamp against the rump.
- At 24 hours prior to delivery, the foal has rotated into diver's position and the deep indentations in the mare's flanks disappear.

LABOR IS NEAR

- Pace
- Snatch at her feed
- Get up and lay down
- Look painfully at her side
- Urinate and defecate frequently
- Lift her tail
- Paw ground/snatch at feet and kick at abdomen
- Sigh and stretch
- Sweat

O Refer to *Breeding Management and Foal Development* or *Fundamentals of Breeding, Volume 1* for further information.

O Emphasize that a mare may not show all of the signs. For example, not all mares wax up.

OBJECTIVE 5

Describe actions to take in the foaling process.

R Show the appropriate sections from the video *Foaling Fundamentals: A Video Handbook for Healthy Foaling.*

R Discuss actions to take in the foaling process. Students should write the information given below in their Information Sheet.

- Prepare sanitary and safe surroundings.
- Wrap the tail and wash vulva and bag.
- After the foal is out, quietly enter stall and remove amnion from head and shoulders.
- Clear the mouth and nasal passages with towel.
- Don't break umbilical cord.
- Make sure the foal is breathing; if the foal is not breathing, rub the foal vigorously.
- Leave the stall and allow the mare and foal to bond.
- Call a veterinarian if foaling is delayed or malpresentation occurs.
- After the mare and foal bond, peel amnion and dry the foal off some more.

☑ **NOTE:** Explain to students that mares are very secretive about foaling. Most mares will foal without any problems and the first time they see the foal may be after the foaling process is completed.

O Refer to *Breeding Management and Foal Development* or *Fundamentals of Breeding, Volume 1* for further information.

O Emphasize that approximately 95% of mares will foal with no complications. Individuals should not interfere any more than necessary with a normal delivery.

OBJECTIVE 6

Identify normal presentation and malpresentations of the foal.

R Show the appropriate sections from the video *Foaling Fundamentals: A Video Handbook for Healthy Foaling.*

R Discuss normal and malpresentations of the foal.

R Use Transparency Master 1 to illustrate presentations of the foal.

O Refer to *Breeding Management and Foal Development* or *Fundamentals of Breeding, Volume 1* for further information.

OBJECTIVE 7

Select from a list foaling conditions requiring veterinarian's assistance.

O Refer to *Breeding Management and Foal Development* or *Fundamentals of Breeding, Volume 1* for further information.

OBJECTIVE 8

Analyze parturition situations. (Assignment Sheet 1)

R See the general instructions for all Assignment Sheets.

OBJECTIVE 9

Describe how to care for a newborn foal.

R Show the appropriate sections from the video *Foaling Fundamentals: A Video Handbook for Healthy Foaling.*

R Discuss how to care for a newborn foal. Students should write the information given below in their Information Sheet.

- Apply iodine to the navel stump and check for patent urachus.
- Observe the foal and ensure that the foal stands within an hour and nurses shortly after.
- Ensure that the foal gets colostrum within the first two hours of life.
- Administer an enema.
- During first 24 hours observe the foal to insure that the foal nurses, is physically active, defecates, urinates, and naps frequently. If any of these are absent call a veterinarian.

- Have a veterinarian perform a postnatal exam. At this time, the veterinarian will usually administer a foal tetanus shot.

O Refer to *Breeding Management and Foal Development* or *Fundamentals of Breeding, Volume 1* for further information.

OBJECTIVE 10 **Describe how to care for a postpartum mare.**

R Show the appropriate sections from the video *Foaling Fundamentals: A Video Handbook for Healthy Foaling.*

R Discuss how to care for a postpartum mare. Students should write the information given below in their Information Sheet.

- When the mare stands, tie amnion in a knot.
- Afterbirth should be expelled within two hours; collect for the veterinarian to examine.
- Wash the vulva and bag.
- Give the mare bran mash and tepid water.
- Have the veterinarian perform a postnatal examination.

O Refer to *Breeding Management and Foal Development* or *Fundamentals of Breeding, Volume 1* for further information.

OBJECTIVE 11 **Match complications following parturition to their descriptions.**

O Refer to *Breeding Management and Foal Development* or *Fundamentals of Breeding, Volume 1* for further information.

OBJECTIVE 12 **List conditions that prevent breeding on foal heat.**

O Refer to *Breeding Management and Foal Development* or *Fundamentals of Breeding, Volume 1* for further information.

OBJECTIVE 13

Analyze scenarios involving newborn foals and postpartum mares.

◙ See the general instructions for all Assignment Sheets.

EVALUATION

Pretest

- Use the unit Written Test for *both* the pretest and posttest. Give the students the pretest before they begin the unit.

- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving pretests and using the results. Information for ordering this material is included in the optional resources section.

- Use pretest results to guide individual students in progressing through the unit, doing enrichment work, or moving to the next unit.

Focus Assignment

- Use an informal evaluation of the focus assignments as a diagnostic tool for determining if any students need extra help in reading comprehension or writing skills. Refer these students to their English instructor, Learning Resource Center, or Educational Enhancement Center.

Assignment Sheet

- Evaluate students on Assignment Sheet activities. Students must repeat an Assignment Sheet until they have mastered the activity.

- Complete each student's Competency Profile.

Skill Test

- Explain to the students that they will be asked to demonstrate the procedures on the Job Sheets as a skills test.

- Describe the rating scale used on the skills test.

- Reteach and retest as necessary.

- Complete each student's Competency Profile.

Posttest

- After they have completed the unit, give students the Written Test again.
- Explain to the students that they will be asked to demonstrate on the Written Test actions listed in the specific objectives.
- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving posttests and using the results. Information for ordering this material is included in the optional resources section.
- Reteach and retest as necessary to meet individual student needs and state standards for student learning and competency gains.
- Complete the appropriate sections of the Competency Profiles.
- Review individual and group performance to evaluate teaching effectiveness. Adjust scope, sequence, or instructional methods for additional lessons as required.

REQUIRED RESOURCES

The items marked with an asterisk are included in the Instructor's Resource Package.

Publications

- *A Foal of Your Own.* Handout.*

Videos

- *Foaling Fundamentals: A Video Handbook for Healthy Foaling.* Virginia City, NV: Video Velocity, 1989.

  ☑ **NOTE:** This video is included in the Media Package available through CIMC.

OPTIONAL RESOURCES

Publications

- *Breeding Management and Foal Development.* Tyler, TX: Equine Research, Inc., 1982.

- *Fundamentals of Breeding, Volume 1.* Modern Horsebreeding. For information on this publication contact Fleet Street Corporation, 656 Quince Orchard Road, Gaithersburg, Maryland 20878, phone (301) 977-3900.
- *Measuring Learning and Competency Gains: The Pretest/Posttest Approach.* Stillwater, OK: CIMC, Oklahoma Department of Vocational and Technical Education, 1992. For ordering information call 800-522-5810.

Videos

- *The Events of Foaling.* Stillwater, OK: Oklahoma State University Cooperative Extension Service.

  ☑ **NOTE:** For information on obtaining this video on a free loan basis contact your local Oklahoma County Extension office.

UNIT REFERENCES

Publications

- *Breeding Management and Foal Development.* Tyler, TX: Equine Research, Inc., 1982.
- "Preparation, Delivery, Recovery: A Guide to Foaling." *Modern Horsebreeding,* Feb. 1990.
- *Proceedings: Foaling Management and the Broodmare.* Equine Management Satellite Teleconference, November 5, 1987. Stillwater, OK: Oklahoma State University Cooperative Extension Service, 1987.

Videos

- *Foaling Fundamentals: A Video Handbook for Healthy Foaling.* Virginia City, NV: Video Velocity, 1989.
- *The Events of Foaling.* Stillwater, OK: Oklahoma State University Cooperative Extension Service.

ASSIGNMENT SHEETS

OBJECTIVE 8

Assignment Sheet 1

1. A veterinarian should be called.
2. A veterinarian should be called.
3. Mare is near labor and any steps or precautions that need to be taken should be done.
4. Foal is in normal presentation. Let the mare proceed with labor and observe.

OBJECTIVE 13

Assignment Sheet 2

1. A veterinarian should be called.
2. A veterinarian should be called.
3. It is normal for the foal to nap. Observe the foal.

WRITTEN TEST

OBJECTIVE 1

Answer should include the following:

- Mare should be checked regularly by a veterinarian during her pregnancy.
- Mare should receive killed rhinopneumonitis at 9-7-5-3 months prior to due date.
- At 30 days prior to the due date, the mare should receive annual shots.
- Mare should be on a regular deworming schedule, receiving deworming no less than 30 days prior to foaling.

- Ensure fencing and walls of foaling area are solid down to the ground.
- Pull the mares shoes at one month prior to due date.
- Clean foaling stall thoroughly.
- Groom the mare daily; check her condition and manipulate nipples.
- Prepare foaling kit.
- Keep accurate records of breeding dates.

OBJECTIVE 2

Answer should include the following:

- Flashlight
- Watch
- Pad and pen
- Sterile cotton
- Bucket with lid
- Sponge
- Ivory liquid
- Athletic bandage
- Towels
- Latex gloves
- Betadine with hemostat, plastic lidded bowl, spray bottle or prescription bottle
- Fleet baby enema
- Vaseline

- Halter, chain shank and twitch
- Goat nipple and bottle
- Foal halter

OBJECTIVE 3

Answer should include the following in any order:

- Clean
- Quiet
- Gentle
- Perseverant
- Knowledgeable
- Skillful
- Experienced

OBJECTIVE 4

Answer should include the following:

ONE MONTH

- Hind end softens.
- Mammary glands enlarge; mare will bag up.

ONE WEEK

- Abdomen becomes more pendulous.
- Milk veins apparent.
- Hind legs retain water.
- Mare is not very social.
- Mare will have trouble finding a comfortable standing position.

- Vulva will be enlarged 3-4 times its normal size.
- Hind end becomes extremely jelly-like.
- Bag is large and nipples are full and round.

12-48 HOURS

- Wax-like substance forms on the end of nipples.
- Tail is loose and can't clamp against the rump.
- At 24 hours prior to delivery, foal has rotated into diver's position and the deep indentations in the mare's flanks disappear.

LABOR IS NEAR

- Pace
- Snatch at her feed
- Get up and lay down
- Look painfully at her side
- Urinate and defecate frequently
- Lift her tail
- Paw ground/snatch at feet and kick at abdomen
- Sigh and stretch
- Sweat

OBJECTIVE 5

Answer should include the following:

- Prepare sanitary and safe surroundings.
- Wrap the tail and wash vulva and bag.
- After the foal is out, quietly enter stall and remove amnion from head and shoulders.

- Clear the mouth and nasal passages with a towel.
- Don't break umbilical cord.
- Make sure the foal is breathing; if the foal is not breathing, rub the foal vigorously.
- Leave the stall and allow mare and foal to bond.
- Call a veterinarian if foaling is delayed or malpresentation occurs.
- After mare and foal bond, peel amnion and dry foal off some more.

OBJECTIVE 6

1. Breech birth
2. Normal presentation
3. Twisted on back
4. Abnormal breech
5. One or both forelegs back
6. Head turned back

OBJECTIVE 7

1, 2, 4, 5, 7, 8, 11, 12

OBJECTIVE 8

Evaluated on Assignment Sheet 1.

OBJECTIVE 9

Answer should include the following:

- Iodine navel stump and check for patent urachus.
- Observe the foal and ensure that the foal stands within an hour and nurses shortly after.
- Ensure that the foal gets colostrum within the first two hours of life.

- Administer an enema.
- During first 24 hours observe foal to insure that the foal nurses, is physically active, defecates, urinates, and naps frequently. If any of these are absent call a veterinarian.
- Have a veterinarian perform a postnatal exam. At this time, the veterinarian will usually administer a foal tetanus shot.

OBJECTIVE 10

Answer should include the following:

- When the mare stands, tie the amnion in a knot.
- Afterbirth should be expelled within two hours; collect for the veterinarian to examine.
- Wash the vulva and bag.
- Give the mare bran mash and tepid water.
- Have the veterinarian perform a postnatal examination.

OBJECTIVE 11

1. C
2. F
3. A
4. H
5. I
6. D

OBJECTIVE 12

Answer should include the following:

- Placenta retained over two hours and weighing more than 14 pounds
- Lacerations of the reproductive tract not healed
- Severe bruises and tears, particularly of the cervix
- Excessive exudate or urine present in the vagina
- Uterus lacks tone, involution

OBJECTIVE 13

Evaluated on Assignment Sheet 2.

CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) EQUINE MANAGEMENT AND PRODUCTION

UNIT NUMBER AND TITLE D4 – PARTURITION

TOTAL NUMBER OF TEST QUESTIONS 97

TOTAL NUMBER OF BASIC SKILL QUESTIONS 46

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
1	1-10	X
2	1-16	X
3	1-7	X
4	1, 2; 1-8; 1-3; 1-9	S
5	1-9	X
6	1-6	S
7	1-12	S
8	Evaluated on AS 1	
9	1-6	X
10	1-5	X
11	1-6	S
12	1-5	X
13	Evaluated on AS 2	

INSTRUCTOR'S
GUIDE

CARE OF MARE AND FOAL

D5

Required Activities and Resources (R)

These are fully integrated components of this CIMC curriculum. They are usually packaged in or with the curriculum and are essential in meeting the learning objectives. To individualize this unit, use the LAP Sheet supplied in your resources.

- Reproducible Handouts and Transparency Masters are included in the Instructor's Resource Package. Handouts should be copied for all students. Transparency Masters should be used to make overhead transparencies for using during instruction. A small copy of each Transparency Master appears in the student's Information Sheets.
- Non-reproducible resources are included in the student's curriculum.

Optional Activities and Resources (O)

These are suggested high-interest activities to help deliver learning objectives to students or to let students achieve objectives in an applied context. Select as many as you wish to use. Some activities use extra resources for further information about the unit content. You can make them available in the classroom for in-depth study or optional activities, but their use is not required for meeting CIMC unit objectives.

FOCUS ASSIGNMENTS

Prereading

R Have students read the Handout *Imprint Training.*

Writing

R Have the students write a short discussion on their opinion of imprint training.

GENERAL INSTRUCTIONS

Assignment Sheets

R Review the directions and any specific guidelines.

R Make certain that any needed materials from the Instructor's Resource Package are available.

R Have the students complete the Assignment Sheet. Evaluate each student's performance and provide reteaching and retesting as necessary. Have the students repeat the Assignment Sheet until they achieve mastery.

R Complete each student's Competency Profile.

O Have the students volunteer to read aloud the directions and any special guidelines.

O Return the completed Assignment Sheets to the students so that they may use them for later reference if needed.

Job Sheets

R Review the Introduction and Evaluation Criteria for the Job Sheet. Remind the students that they should not fill in the blanks in the Yes/No columns.

R Review and explain all general guidelines, safety cautions, and warnings.

R Make sure that all tools, equipment, and supplies are available.

R Demonstrate each of the procedures outlined in the Job Sheet.

R Allow the students to practice the Job Sheet skills before skills testing. Coach, correct, and supervise as necessary.

R Have the students complete the Job Sheet. Evaluate each student's performance and provide remediation as necessary. Have the students repeat the Job Sheet until they achieve mastery.

R Complete each student's Competency Profile.

R Return the completed Job Sheet to the students so that they may use them for later reference if needed.

O Have the students volunteer to read aloud the job guidelines, cautions, and warnings.

LAP Sheets

The LAP Sheets are an optional component that can be used to individualize instruction. The following instructions should be followed only if you are using the LAP Sheets.

R Explain the specific procedures to be followed to the students before they begin using the LAP Sheet. Be sure that each student understands the procedures for using the LAP Sheet.

R If you want the student to complete any of the assignments on the LAP Sheet that are labeled optional, assign these to the student. Be sure to provide any needed resources.

OBJECTIVE 1

Describe management practices important in caring for the mare and neonate foal.

O Discuss management practices in caring for mare and neonate foal. Emphasize that this is a very critical time in the foal's life and it should be observed for signs of illness, disease, or abnormalities.

O For further information refer to *Breeding Management & Foal Development* or *Fundamentals of Breeding, Volume 1.*

OBJECTIVE 2

Describe management practices important in caring for mare and foal until weaning.

O Discuss management practices important in caring for mare and foal until weaning.

O Obtain OSU Fact Sheet No. 3985 *Nursing Foal Management* and make it available for students to read.

O For further information refer to *Breeding Management & Foal Development* or *Fundamentals of Breeding, Volume 1.*

OBJECTIVE 3

Match common diseases and problems to watch for in foals to their definitions.

R Discuss that these are not all of the problems that foals may have. Stress that a veterinarian should always be consulted if the horse owner suspects problems in the foal.

O For further information refer to *Breeding Management & Foal Development, Horse Owner's Veterinary Handbook,* or *Horses: A Guide to Selection, Care, and Enjoyment.*

OBJECTIVE 4

Match common diseases and problems of foals to their symptoms.

O Discuss common diseases and problems of foals and their symptoms. Emphasize that the foal should be observed for any signs of disease or illness.

O For further information refer to *Breeding Management & Foal Development, Horse Owner's Veterinary Handbook*, or *Horses: A Guide to Selection, Care, and Enjoyment.*

OBJECTIVE 5

Describe considerations in weaning.

O Obtain OSU Extension Fact Sheet No. 3978 *Weaning Management Practices For Foals* and make it available for students to read.

OBJECTIVE 6

Describe nutrition requirements for lactating mares and foals.

O Refer students to Unit C1 "Practical Horse Nutrition." Use the nutrient requirements software program to calculate nutrition requirements for a lactating mare.

OBJECTIVE 7

Analyze problem situations involving foals. (Assignment Sheet)

R See the general instructions for all Assignment Sheets.

EVALUATION

Pretest

- Use the unit Written Test for *both* the pretest and posttest. Give the students the pretest before they begin the unit.
- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving pretests and using the results. Information for ordering this material is included in the optional resources section.
- Use pretest results to guide individual students in progressing through the unit, doing enrichment work, or moving to the next unit.

Focus Assignment

- Use an informal evaluation of the focus assignments as a diagnostic tool for determining if any students need extra help in reading comprehension or writing skills. Refer these students to their English instructor, Learning Resource Center, or Educational Enhancement Center.

Assignment Sheet

- Evaluate students on Assignment Sheet activities. Students must repeat an Assignment Sheet until they have mastered the activity.
- Complete each student's Competency Profile.

Skill Test

- Explain to the students that they will be asked to demonstrate the procedures on the Job Sheets as a skills test.
- Describe the rating scale used on the skills test.
- Reteach and retest as necessary.

Posttest

- After they have completed the unit, give students the Written Test again.
- Explain to the students that they will be asked to demonstrate on the Written Test actions listed in the specific objectives.
- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving posttests and using the results. Information for ordering this material is included in the optional resources section.
- Reteach and retest as necessary to meet individual student needs and state standards for student learning and competency gains.
- Complete the appropriate sections of the Competency Profiles.
- Review individual and group performance to evaluate teaching effectiveness. Adjust scope, sequence, or instructional methods for additional lessons as required.

REQUIRED RESOURCES

The items marked with an asterisk are included in the Instructor's Resource Package.

Publications

- *Imprint Training*. Handout.*

OPTIONAL RESOURCES

Publications

- *Breeding Management & Foal Development*. Tyler, TX: Equine Research, Inc., 1982.
- Evans, J. Warren. *Horses: A Guide to Selection, Care, and Enjoyment*. New York: W.H. Freeman and Company, 1989.
- *Fundamentals of Breeding, Volume 1*. Gaithersburg, Maryland: Fleet Street Corporation, 1989.

  ☑ **NOTE:** For information on obtaining this publication contact Fleet Street Corporation, 656 Quince Orchard Road, Gaithersbury, Maryland 20878, (301-977-3900).

- Giffin, James M. and Tom Gore. *Horse Owner's Veterinary Handbook*. New York: Howell Book House, 1989.
- Lose, M. Phyllis. *Blessed are the Brood Mares*, (2nd ed.). New York: Howell Book House, 1991.
- *Measuring Learning and Competency Gains: The Pretest/Posttest Approach*. Stillwater, OK: CIMC, Oklahoma Department of Vocational and Technical Education, 1992. For ordering information call 800-522-5810.
- *Nursing Foal Management*. OSU Extension Facts No. 3985. Stillwater, OK: Oklahoma State University Cooperative Extension Service, 1989.
- *Weaning Management Practices For Foals*. OSU Extension Facts No. 3978. Stillwater, OK: Oklahoma State University Cooperative Extension Service, 1988.

  ☑ **NOTE:** For information on obtaining OSU Fact Sheets contact your local Oklahoma County Extension office.

UNIT REFERENCES

Publications

- *Breeding Management & Foal Development.* Tyler, TX: Equine Research, Inc., 1982.
- Evans, J. Warren. *Horses: A Guide to Selection, Care, and Enjoyment.* New York: W.H. Freeman and Company, 1989.
- *Fundamentals of Breeding, Volume 1.* Gaithersburg, Maryland: Fleet Street Corporation, 1989.
- Giffin, James M. and Tom Gore. *Horse Owner's Veterinary Handbook.* New York: Howell Book House, 1989.
- Hawcroft, Tim. *The Complete Book of Horse Care.* New York: Howell Book House, 1992.
- Lose, M. Phyllis. *Blessed are the Brood Mares,* (2nd ed.). New York: Howell Book House, 1991.
- *Nursing Foal Management.* OSU Extension Facts No. 3985. Stillwater, OK: Oklahoma State University Cooperative Extension Service, 1989.
- *Weaning Management Practices For Foals.* OSU Extension Facts No. 3978. Stillwater, OK: Oklahoma State University Cooperative Extension Service, 1988.

ASSIGNMENT SHEETS

OBJECTIVE 7

Assignment Sheet 1

Case 1

Snowflake could have diarrhea because of the mare being in foal heat. Symptoms to be watched for are weakness and fever.

Case 2

Meconium retention is one possible cause of the behavior.

Case 3

Symptoms of tetanus are one possible cause of the stiffness. The owner's should have ensured that Rudy had received his tetanus shot and also should have checked the pasture before placing Rudy in it.

WRITTEN TEST

OBJECTIVE 1

Answer should include the following:

- Observe closely for disease and/or injury.
- Observe the foal actually nursing the teat and be sure the mare is nursed out.
- Check navel for dryness and absence of patent urachus.
- Observe for entropion.
- Observe for any signs of discontent in the mare or the foal.

- Observe the foal's legs for any abnormalities such as contracted tendons or pasterns relaxed and appearing coon footed.
- Watch mare for post-foaling cramping as uterus involutes (contracts down).
- Feed the mare a balanced ration.
- Enable the mare and foal to bond during first few days.
- Administer antibiotics and tetanus antitoxin as recommended by a veterinarian.
- Give enemas to prevent meconium impaction as recommended by a veterinarian.

OBJECTIVE 2

Answer should include the following:

- Decide on re-breeding of mare on foal heat or the cycles that follow.
- Observe closely for disease and/or injury.
- Feed the mare a balanced ration.
- Deworm as recommended by a veterinarian.
- Trim the feet on both the mare and foal at regular intervals of 6-8 weeks.
- Group mare and foal with other mares and foals.
- Gentle and handle foals so that medications and treatments may be administered and feet trimmed.
- Ensure that the foal gets adequate exercise.

OBJECTIVE 3

1. P
2. H
3. O
4. E
5. B
6. N
7. G
8. I
9. L
10. M

OBJECTIVE 4

1. P
2. E
3. B
4. J
5. G
6. N
7. I
8. M
9. O
10. H

OBJECTIVE 5

Answer should include the following:

- Start young foals on a nutrition program.
- Teach the foal basic handling before weaning.
- Ensure good health of the foal before weaning.
- Select an optimum time of weaning.
- Determine the method of weaning.
- Lessen weaning stress.
- Check weaning environment for safety hazards.
- Observe mare for behavior and health problems.
- Continue disease and parasite prevention programs and proper nutrition for the weanling.

OBJECTIVE 6

Answer should include the following:

- The mare's nutrient requirement increases by at least 75% when lactating.
- Mare's body weight should be maintained.
- Calcium, phosphorus, and other minerals are required at increased levels.
- The mare cannot consume enough good quality grass hay or grass forage to meet her nutrient requirements.

OBJECTIVE 7

Evaluated on the Assignment Sheet.

Page 1 of 1

CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) EQUINE MANAGEMENT AND PRODUCTION

UNIT NUMBER AND TITLE D5 – CARE OF MARE AND FOAL

TOTAL NUMBER OF TEST QUESTIONS 24

TOTAL NUMBER OF BASIC SKILL QUESTIONS 24

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
1	**1**	**W**
2	**1**	**W**
3	**1-10**	**S**
4	**1-10**	**S**
5	**1**	**W**
6	**1**	**W**
7	**Evaluated on the AS**	

INSTRUCTOR'S GUIDE

IDENTIFICATION, SELECTION, AND MARKETING OF THE HORSE

E1

Required Activities and Resources (R)

These are fully integrated components of this CIMC curriculum. They are usually packaged in or with the curriculum and are essential in meeting the learning objectives. To individualize this unit, use the LAP Sheet supplied in your resources.

- Reproducible Handouts and Transparency Masters are included in the Instructor's Resource Package. Handouts should be copied for all students. Transparency Masters should be used to make overhead transparencies for use during instruction. A small copy of each Transparency Master appears in the student's Information Sheets.

- Non-reproducible resources are included in the student's curriculum.

Optional Activities and Resources (O)

These are suggested high-interest activities to help deliver learning objectives to students or to let students achieve objectives in an applied context. Select as many as you wish to use. Some activities use extra resources for further information about unit content. You can make them available in the classroom for in-depth study or optional activities, but their use is not required for meeting CIMC unit objectives.

FOCUS ASSIGNMENTS

Prereading

R Have the students read OSU Extension Facts No. 9114 *Equine Purchase Examinations.*

Writing

R Have the students write a short discussion on the benefits of equine purchase examinations.

GENERAL INSTRUCTIONS

Assignment Sheets

R Review the directions and any specific guidelines.

R Make certain that any needed materials from the Instructor's Resource Package are available.

R Have the students complete the Assignment Sheet. Evaluate each student's performance and provide reteaching and retesting as necessary. Have the students repeat the Assignment Sheet until they achieve mastery.

R Complete each student's Competency Profile.

O Have the students volunteer to read aloud the directions and any special guidelines.

O Return the completed Assignment Sheets to the students so that they may use them for later reference if needed.

Job Sheets

R Review the introduction and evaluation criteria for the Job Sheet. Remind the students that they should not fill in the blanks in the Yes/No columns.

R Review and explain all general guidelines, safety cautions, and warnings.

R Make sure that all tools, equipment, and supplies are available.

R Demonstrate each of the procedures outlined in the Job Sheet.

R Allow the students to practice the Job Sheet skills before skills testing. Coach, correct, and supervise as necessary.

R Have the students complete the Job Sheet. Evaluate each student's performance and provide remediation as necessary. Have the students repeat the Job Sheet until they achieve mastery.

R Complete each student's Competency Profile.

R Return the completed Job Sheets to the students so that they may use them for later reference if needed.

O Have the students volunteer to read aloud the job guidelines, cautions, and warnings.

LAP Sheets

The LAP Sheets are an optional component that can be used to individualize instruction. The following instructions should be followed only if you are using the LAP Sheets.

R Explain the specific procedures to be followed to the students before they begin using the LAP Sheet. Be sure that each student understands the procedures for using the LAP Sheet.

R If you want the student to complete any of the assignments on the LAP Sheet that are labeled optional, assign these to the student. Be sure to provide any needed resources.

OBJECTIVE 1

Identify and describe common Quarter Horse leg markings.

O Show students photographs of horses and have them identify the leg markings.

O Explain to students that different associations may recognize different markings. The markings shown are recognized by the American Quarter Horse Association. Emphasize that other breed associations recognize similar markings. Discuss the markings recognized by other breed associations such as the Jockey Club.

OBJECTIVE 2

Identify and describe common Quarter Horse head markings.

O Show students photographs of horses and have them identify the head markings.

O Explain to students that different associations may recognize different markings. The markings shown are recognized by the American Quarter Horse Association. Emphasize that other breed associations recognize similar markings. Discuss the markings recognized by other breed associations such as the Jockey Club.

OBJECTIVE 3 **Describe common colors recognized by the American Quarter Horse Association.**

R Have the students refer to the AQHA colors and markings chart to learn the 13 colors recognized by the AQHA. Students should write the following information in their Information Sheet.

- Sorrel – Body color reddish or copper-red; mane and tail usually same color as body, but may be flaxen.
- Black – Body color true black without light areas; mane and tail black.
- Chestnut – Body color dark red or brownish-red; mane and tail usually dark red or brownish-red but may be flaxen.
- Brown – Body color brown or black with light areas at muzzle, eyes, flank and inside upper legs; mane, tail, and points black.
- Grullo – body color smoky or mouse-colored; mane and tail black; usually black on lower legs; usually has dorsal stripe.
- Bay – Body color ranging from tan, through red, to reddish brown; mane and tail black usually black on lower legs.
- Red Roan – More or less uniform mixture of white with red hairs on the body, but usually darker on head and lower legs; can have red, black or flaxen mane and/or tail.
- Blue Roan – More or less uniform mixture of white and black hairs on the body, but usually darker on head and lower legs; can have a few red hairs in mixture.
- Dun – Body color yellowish or gold; mane and tail may be black, brown, or mixed; usually has dorsal stripe; zebra stripes on legs; and transverse stripe over withers.
- Red Dun – A form of dun with body color yellowish or flesh colored; mane, tail and dorsal stripe usually are red; mane and tail may be flaxen, white or mixed.
- Palomino – Body color a golden yellow; mane and tail white; Palominos do not have dorsal stripes.

- Gray – Mixture of white with any other colored hairs; often born solid colored or almost solid colored and get lighter with age as more white hairs appear.

- Buckskin – Body color yellowish or gold; mane and tail black; usually black on lower legs; Buckskins do not have dorsal stripes.

O Show students photographs of Quarter Horses and have them identify the colors. For more information contact:

American Quarter Horse Association
P.O. Box 200
Amarillo, TX 79168
(806) 376-4811

OBJECTIVE 4

Describe color patterns of the American Paint Horse.

R Use the American Paint Horse handbook to lead a class discussion on the color patterns of the American Paint Horse. Students should write the following information in their Information Sheet.

OVERO

- The white originates on the underside of the horse and will rarely cross the back of the horse between its withers and tail.

- Usually, at least one, and often all four legs will be the dark color.

- Head markings are predominantly white; often bald, apron or bonnet-faced.

- The tail is usually one color.

- An overo horse may be either predominantly dark or white.

TOBIANO

- The tobiano normally exhibits white across the spine extending downward between the ears and tail in a clearly marked pattern.

- Head markings will be like those of a solid-colored horse – solid or with a blaze, strip, star or snip.

- Generally, all four legs will be white, at least below the hocks and knees. The tobiano rarely has more than one or two solid-colored legs.

- Generally, the spots are regular and distinct as ovals or round patterns that extend down over the neck and chest, giving the appearance of a shield.

- The horse will usually have the dark color on one or both flanks.

- A tobiano may be either predominantly dark or white.

TOVERO

- Horses show characteristics of both color patterns.

O Discuss the colors recognized by the American Paint Horse Association.

O For more information on the American Paint Horse or for information on obtaining additional brochures and posters contact:

The American Paint Horse Association
P.O. Box 961023
Fort Worth, TX 76161-0023

(817) 439-3400

OBJECTIVE 5

List distinguishing characteristics of the Appaloosa.

R Use the Appaloosa handout to lead a class discussion on the distinguishing characteristics of the Appaloosa. Students should write the following information in their Information Sheet.

- White sclera

- Striped hooves

- Mottled skin

- Coat pattern

O Discuss the colors recognized by the Appaloosa Horse Club.

☑ **NOTE:** At the time of printing this publication, *A Guide to Identifying and Registering the Appaloosa* was not available. To check on the availability of this publication contact the Appaloosa Horse Club, Inc.

O For more information on the Appaloosa horse or for information on obtaining additional brochures and posters contact:

Appaloosa Horse Club, Inc.
P.O. Box 8403
5070 Highway 8 West
Moscow, ID 83843

(208) 882-5578

OBJECTIVE 6

List colors recognized by the Arabian Horse Registry.

R Use the Arabian handbook to lead a class discussion on the colors of the Arabian horse. Students should write the following colors in their Information Sheet.

- Bay
- Black
- Chestnut
- Grey
- Roan

O Discuss the characteristics of the Arabian horse.

O For more information on the Arabian horse contact:

Arabian Horse Registry
1200 Zuni Street
Westminster, CO 80234

(303) 450-4748

OBJECTIVE 7

List colors recognized by the Jockey Club.

O Obtain the handbook *Methods of Identifying the Thoroughbred.* Use the handbook on colors of the Thoroughbred to lead a class discussion on the colors recognized by the Jockey Club. For information on obtaining the handbook contact:

The Jockey Club
821 Corporate Drive
Lexington, KY 40503

O Obtain photographs or advertisements of Thoroughbreds and ask students to identify the colors.

OBJECTIVE 8

Match natural gaits to their descriptions.

O Discuss the gaits of the horse. Explain that different breeds such as the Tennessee Walking horse or the Paso Fino horse are valued for their distinguishing gaits.

OBJECTIVE 9

List factors to consider when selecting a horse to purchase.

O Discuss factors to consider when selecting a horse to purchase. Ask students what they would look for in a horse if they were purchasing.

O Show the video *Pre-Purchase Examination for Horses and Merchandising the Yearling Horse.*

OBJECTIVE 10

Complete Quarter Horse registration forms. (Assignment Sheet 1)

R See the general instructions for all Assignment Sheets.

OBJECTIVE 11

Describe normal measurements pertinent to a horse.

O Explain that measurements will vary according to breeds. For example, a Clydesdale (draft horse) will be larger than a light breed horse such as a Morgan.

OBJECTIVE 12 **Determine height, weight, and girth. (Job Sheet 1)**

R See the general instructions for all Job Sheets.

OBJECTIVE 13 **Describe changes in horse's teeth with advancing age.**

O Discuss changes in the horse's teeth with advancing age.

OBJECTIVE 14 **Complete a chart on determining age of horse by appearance and description of teeth.**

O Discuss determining the age of a horse by the appearance and description of teeth. Emphasize that only an estimation of the age can be made.

O Obtain the pamphlet *Official Guide for Determining the Age of the Horse* by the American Association of Equine Practitioners.

O Obtain the article *Straight from the Horse's Mouth* from the November 1993 American Quarter Horse Journal.

OBJECTIVE 15 **Determine age of horse by examining teeth. (Job Sheet 2)**

R See the general instructions for all Job Sheets.

OBJECTIVE 16 **List general considerations in marketing a horse.**

O Discuss general considerations in marketing a horse. Find examples or have students find examples of marketing a horse. For example, show catalogs or advertisements in newspapers. Discuss the horses for sale.

OBJECTIVE 17 **List means of marketing the horse.**

O Discuss means of marketing a horse. Find examples or have students find examples of marketing a horse. For example, show catalogs or advertisements in newspapers. Discuss why the horses are marketed a certain way such as price, performance record, etc.

OBJECTIVE 18

Develop a marketing plan for a horse. (Assignment Sheet 2)

R See the general instructions for all Assignment Sheets.

EVALUATION

Pretest

- Use the unit Written Test for *both* the pretest and posttest. Give the students the pretest before they begin the unit.

- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving pretests and using the results. Information for ordering this material is included in the optional resources section.

- Use pretest results to guide individual students in progressing through the unit, doing enrichment work, or moving to the next unit.

Focus Assignment

- Use an informal evaluation of the focus assignments as a diagnostic tool for determining if any students need extra help in reading comprehension or writing skills. Refer these students to their English instructor, Learning Resource Center, or Educational Enhancement Center.

Assignment Sheet

- Evaluate students on Assignment Sheet activities. Students must repeat an Assignment Sheet until they have mastered the activity.

- Complete each student's Competency Profile.

Skill Test

- Explain to the students that they will be asked to demonstrate the procedures on the Job Sheets as a skills test.

- Describe the rating scale used on the skills test.

- Reteach and retest as necessary.

- Complete each student's Competency Profile.

Posttest

- After they have completed the unit, give students the Written Test again.
- Explain to the students that they will be asked to demonstrate on the Written Test actions listed in the specific objectives.
- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving posttests and using the results. Information for ordering this material is included in the optional resources section.
- Reteach and retest as necessary to meet individual student needs and state standards for student learning and competency gains.
- Complete the appropriate sections of the Competency Profiles.
- Review individual and group performance to evaluate teaching effectiveness. Adjust scope, sequence, or instructional methods for additional lessons as required.

REQUIRED RESOURCES

The items marked with an asterisk are included in the Instructor's Resource Package.

Publications

☑ **NOTE:** The following resources are packaged with the student workbooks.

- *American Paint Horse Association Identification and Registration Handbook: Identifying the Paint Horse, Part I.* American Paint Horse Association.
- *AQHA Colors and Markings Reference Chart.* American Quarter Horse Association.
- *The Arabian Horse.* Arabian Horse Association.
- *Equine Purchase Examinations.* OSU Extension Facts No. 9114. Stillwater, OK: Oklahoma Cooperative Extension Service.
- *Identifying the Appaloosa* from *A Guide to Identifying and Registering the Appaloosa.* Appaloosa Horse Club.

OPTIONAL RESOURCES

Publications

- *Measuring Learning and Competency Gains: The Pretest/Posttest Approach.* Stillwater, OK: CIMC, Oklahoma Department of Vocational and Technical Education, 1992. For ordering information call 800-522-5810.
- *Methods of Identifying the Thoroughbred.* The Jockey Club.
- *Official Guide for Determining the Age of the Horse.* American Association of Equine Practitioners, P.O. Box 55248, Lexington, KY 40505.
- Groves, Leslie. "Straight from the Horse's Mouth." *The Quarter Horse Journal*, November 1993, p. 51.

Videos

- *Pre-Purchase Examination for Horses and Merchandising the Yearling Horse.* Stillwater, OK: Oklahoma Cooperative Extension Service.

☑ **NOTE:** For information on this video contact your local Oklahoma County Extension office.

UNIT REFERENCES

Publications

- *AQHA Colors and Markings Reference Chart.* American Quarter Horse Association.
- *American Paint Horse Association Identification and Registration Handbook: Identifying the Paint Horse, Part I.* American Paint Horse Association.
- *The Arabian Horse.* Arabian Horse Association.
- Evans, J. Warren. *Horses: A Guide to Selection, Care, and Enjoyment, (2nd ed.).* New York: W.H. Freeman and Company, 1989.
- *Equine Science.* College Station, TX: Instructional Media Services, Texas A&M University, 1990.
- *A Guide to Identifying and Registering the Appaloosa.* Appaloosa Horse Club.
- *Methods of Identifying the Thoroughbred.* The Jockey Club.

Videos

- *Pre-Purchase Examination for Horses and Merchandising the Yearling Horse.* Stillwater, OK: Oklahoma Cooperative Extension Service.

ASSIGNMENT SHEETS

OBJECTIVE 10

Assignment Sheet 1

Student answers will vary. Registration forms should be completed accurately for the horse chosen.

OBJECTIVE 18

Assignment Sheet 2

Student answers will vary. Students should develop a marketing plan for the horses chosen.

WRITTEN TEST

OBJECTIVE 1

1. half pastern – a marking that includes half of the horse's pastern above the coronet
2. coronet – any narrow marking around the horse's coronet above the hoof
3. socks – a marking that extends either from the horse's coronet half way to the cannon bone, half way up the knee on the foreleg, or half way to the hock on the back leg
4. pasterns – a marking that includes the entire horse's pastern
5. stockings – an extended sock that is a full marking to the area of the horse's knee on the foreleg and to the area of the hock on the hind leg

OBJECTIVE 2

1. star – any marking on the horse's forehead
2. strip – a narrow marking between the horse's forehead and nostrils, extending vertically
3. snip – any marking between the horse's two nostrils, usually vertical
4. bald face – a broad blaze; it can extend out and around the horse's eyes and also down to the horse's upper lip and around the nostrils
5. star and strip – a marking on the horse's forehead with a strip to the nasal peak; the strip is not always an extension of the star
6. blaze – a vertical marking that extends the length of the face and is of medium width and is relatively uniform
7. star, strip and snip – a marking on the horse's forehead with a narrow extension of the nasal peak and opening up again between the horse's nostrils; the star, strip and snip may be connected

OBJECTIVE 3

Students should list the 13 colors and descriptions.

- Sorrel – Body color reddish or copper-red; mane and tail usually same color as body, but may be flaxen.
- Black – Body color true black without light areas; mane and tail black.
- Chestnut – Body color dark red or brownish-red; mane and tail usually dark red or brownish-red but may be flaxen.
- Brown – Body color brown or black with light areas at muzzle, eyes, flank and inside upper legs; mane, tail, and points black.
- Grullo – body color smoky or mouse-colored; mane and tail black; usually black on lower legs; usually has dorsal stripe.
- Bay – Body color ranging from tan, through red, to reddish brown; mane and tail black usually black on lower legs.

- Red Roan – More or less uniform mixture of white with red hairs on the body, but usually darker on head and lower legs; can have red, black or flaxen mane and/or tail.

- Blue Roan – More or less uniform mixture of white and black hairs on the body, but usually darker on head and lower legs; can have a few red hairs in mixture.

- Dun – Body color yellowish or gold; mane and tail may be black, brown, or mixed; usually has dorsal stripe; zebra stripes on legs; and transverse stripe over withers.

- Red Dun – A form of dun with body color yellowish or flesh colored; mane, tail and dorsal stripe usually are red; mane and tail may be flaxen, white or mixed.

- Palomino – Body color a golden yellow; mane and tail white; Palominos do not have dorsal stripes.

- Gray – Mixture of white with any other colored hairs; often born solid colored or almost solid colored and get lighter with age as more white hairs appear.

- Buckskin – Body color yellowish or gold; mane and tail black; usually black on lower legs; Buckskins do not have dorsal stripes.

OBJECTIVE 4

Students should describe the three color patterns of the Paint: Overo, Tobiano, and Tovero.

OVERO

- The white originates on the underside of the horse and will rarely cross the back of the horse between its withers and tail.

- Usually, at least one, and often all four legs will be the dark color.

- Head markings are predominantly white; often bald, apron or bonnet-faced.

- The tail is usually one color.

- An overo horse may be either predominantly dark or white.

TOBIANO

- The tobiano normally exhibits white across the spine extending downward between the ears and tail in a clearly marked pattern.
- Head markings will be like those of a solid-colored horse – solid or with a blaze, strip, star or snip.
- Generally, all four legs will be white, at least below the hocks and knees. The tobiano rarely has more than one or two solid-colored legs.
- Generally, the spots are regular and distinct as ovals or round patterns that extend down over the neck and chest, giving the appearance of a shield.
- The horse will usually have the dark color on one or both flanks.
- A tobiano may be either predominantly dark or white.

TOVERO

- Horses show characteristics of both color patterns.

OBJECTIVE 5

Answer should include the following in any order:

- White sclera
- Striped hooves
- Mottled skin
- Coat pattern

OBJECTIVE 6

Answer should include the following in any order:

- Bay
- Black
- Chestnut
- Grey
- Roan

OBJECTIVE 7

Answer should include the following in any order:

- Bay
- Dark Bay or Brown
- Black
- Chestnut
- Roan
- Gray

OBJECTIVE 8

1. D
2. C
3. F
4. A

OBJECTIVE 9

Answer should include the following in any order:

- Age
- Breed
- Color
- Conformation
- Cost

- Pedigree
- Performance record
- Reproduction record
- Sex
- Size
- Soundness
- Training
- Use

OBJECTIVE 10

Evaluated on Assignment Sheet 1.

OBJECTIVE 11

Answer should include the following:

- Height – Determined by measuring vertical distance from withers to ground; usually expressed in "hands"
- Weight – Best determined by placing animals on scales; approximation may be made with weight tape; expressed in pounds
- Girth – Circumference of chest behind withers and in front of back; expressed in inches

OBJECTIVE 12

Evaluated on Job Sheet 1.

OBJECTIVE 13

Answer should include the following in any order:

- Slant out toward front
- Change in wearing surface
- Change in shape of cups
- Change in shape of dental star and tooth

OBJECTIVE 14

1. Birth to one month
2. Lateral or intermediate temporary incisors appear
3. Third or corner temporary incisors appear
4. 1 year of age
5. Shows full mouth of incisors; all are now in wear
6. Central permanent incisors replace temporary
7. 3 years of age
8. Lateral or intermediate permanent incisors appear
9. 4 years of age
10. 4 1/2 years of age
11. Full mouth of permanent incisors in wear
12. 6 years of age
13. Cups also worn out of lower central incisors
14. 8 years of age
15. 9 years of age
16. 10 years of age
17. Cups worn out of all upper and lower incisors, and dental "star" approaches center of cups; "smooth mouthed"

OBJECTIVE 15

Evaluated on Job Sheet 2.

OBJECTIVE 16

Answer should include the following in any order:

- Age
- Breed
- Conformation
- Pedigree

- Performance record
- Price
- Reproduction record
- Sex
- Soundness
- Training
- Use

OBJECTIVE 17 Answer should include the following in any order:

- Private treaty sale
- Consign to agent
- Public sale
- Advertise in magazine and/or newspaper
- Syndicate

OBJECTIVE 18 **Evaluated on Assignment Sheet 2.**

CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) EQUINE MANAGEMENT AND PRODUCTION

UNIT NUMBER AND TITLE E1 – IDENTIFICATION, SELECTION, AND MARKETING OF THE HORSE

TOTAL NUMBER OF TEST QUESTIONS 97

TOTAL NUMBER OF BASIC SKILL QUESTIONS 49

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
1	1-5	W
2	1-7	W
3	1-13	W
4	1-3	W
5	1-4	X
6	1-5	X
7	1-6	X
8	1-4	X
9	1-13	X
10	Evaluated on AS 1	
11	1-3	W
12	Evaluated on JS 1	
13	1	W
14	1-17	S
15	Evaluated on JS 2	
16	1-11	X
17	1-5	X

CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) EQUINE MANAGEMENT AND PRODUCTION

UNIT NUMBER AND TITLE E1 – IDENTIFICATION, SELECTION, AND MARKETING OF THE HORSE

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
18	**Evaluated on AS 2**	

INSTRUCTOR'S GUIDE

JUDGING

E2

Required Activities and Resources (R)

These are fully integrated components of this CIMC curriculum. They are usually packaged in or with the curriculum and are essential in meeting the learning objectives. To individualize this unit, use the LAP Sheet supplied in your resources.

- Reproducible Handouts and Transparency Masters are included in the Instructor's Resource Package. Handouts should be copied for all students. Transparency Masters should be used to make overhead transparencies for use during instruction. A small copy of each Transparency Master appears in the student's Information Sheets.
- Non-reproducible resources are included in the student's curriculum.

Optional Activities and Resources (O)

These are suggested high-interest activities to help deliver learning objectives to students or to let students achieve objectives in an applied context. Select as many as you wish to use. Some activities use extra resources for further information about unit content. You can make them available in the classroom for in-depth study or optional activities, but their use is not required for meeting CIMC unit objectives.

FOCUS ASSIGNMENTS

Prereading

R Have the students read the Handout *Form Follows Function.*

Writing

R Have the students write a short discussion on why individuals need to be able to judge horses. Have them include examples where they might need to be able to judge horses.

GENERAL INSTRUCTIONS

Assignment Sheets

R Review the directions and any specific guidelines.

R Make certain that any needed materials from the Instructor's Resource Package are available.

R Have the students complete the Assignment Sheet. Evaluate each student's performance and provide reteaching and retesting as necessary. Have the students repeat the Assignment Sheet until they achieve mastery.

R Complete each student's Competency Profile.

O Have the students volunteer to read aloud the directions and any special guidelines.

O Return the completed Assignment Sheets to the students so that they may use them for later reference if needed.

Job Sheets

R Review the introduction and evaluation criteria for the Job Sheet. Remind the students that they should not fill in the blanks in the Yes/No columns.

R Review and explain all general guidelines, safety cautions, and warnings.

R Make sure that all tools, equipment, and supplies are available.

R Demonstrate each of the procedures outlined in the Job Sheet.

R Allow the students to practice the Job Sheet skills before skills testing. Coach, correct, and supervise as necessary.

R Have the students complete the Job Sheet. Evaluate each student's performance and provide remediation as necessary. Have the students repeat the Job Sheet until they achieve mastery.

R Complete each student's Competency Profile.

R Return the completed Job Sheets to the students so that they may use them for later reference if needed.

O Have the students volunteer to read aloud the job guidelines, cautions, and warnings.

LAP Sheets

The LAP Sheets are an optional component that can be used to individualize instruction. The following instructions should be followed only if you are using the LAP Sheets.

R Explain the specific procedures to be followed to the students before they begin using the LAP Sheet. Be sure that each student understands the procedures for using the LAP Sheet.

R If you want the student to complete any of the assignments on the LAP Sheet that are labeled optional, assign these to the student. Be sure to provide any needed resources.

OBJECTIVE 1

Describe factors to consider in judging halter classes.

R Show the appropriate sections of the video *Judging Halter Horses*.

R Discuss the factors to consider in judging halter classes. Information the students should write in their Information Sheet is given below. Circulate around the room to ensure students have correct information.

1. Balance – how a horse's parts fit together in proportion to one another; four ways to evaluate balance:
    - Side view – divide horse into thirds
    - Depth of body – relative to length of leg
    - Height at withers and croup
    - Same width across shoulders as across hips
2. Structural correctness – evaluate neck, shoulder, withers, width of chest, upper leg, lower leg, back and loin, croup, hip, hind leg
3. Quality – denotes refinement, condition and sex character (masculinity and femininity); also the physical aspects of the following body parts: head, neck, hair coat, cleanness of bone, freedom from blemishes

4. Muscling – varies from breed to breed; three factors affect muscling:
    - Length
    - Overall size or volume
    - Definition or Expression
5. Breed type/character – varies from breed to breed; factors to consider:
    - Quality of head/neck
    - Volume and pattern of muscling
    - Overall size and substance
6. Tracking (Way of Going/Travel) – indication of quality of movement, correctness of movement, soundness or unsoundness

OBJECTIVE 2

Complete a chart on desirable and undesirable characteristics of horses' anatomy.

O Obtain pictures of horses and find examples of desirable and undesirable characteristics. Ask students to determine the characteristics.

OBJECTIVE 3

Explain the system of examination and characteristics for judging.

O Discuss the system of examination and characteristics for judging. Explain that judging takes time to learn and do well.

OBJECTIVE 4

Select from a list common unsoundnesses of feet and legs.

O Discuss common unsoundnesses of feet and legs.

OBJECTIVE 5 **Match structural defects which commonly cause unsoundness to their descriptions.**

O Refer to Unit B5 for greater detail of structural defects. Show the Transparency Masters from Unit B5 to students.

OBJECTIVE 6 **Complete a chart on evaluation of unsoundness and defects.**

O Discuss unsoundness and defects. Point out that the degree of unsoundness or defect should be considered. Since horses are ultimately valued for their performance, emphasize that any defect which causes the horse to be unable to perform is a negative factor.

OBJECTIVE 7 **List important factors to consider in taking notes for oral reasons.**

O Discuss taking notes for oral reasons. Show students samples of notes, if possible.

OBJECTIVE 8 **List important items to consider when organizing reasons for presentation.**

O Discuss important items to consider when organizing reasons for presentation. Stress that clarity is important. Students must be able to go back and understand what they were writing.

OBJECTIVE 9 **Discuss techniques for delivering reasons.**

O Discuss techniques for delivering reasons. Have a sample set of reasons and ask for volunteers to present them.

OBJECTIVE 10 **Judge a halter class. (Assignment Sheet 1)**

R See the general instructions for all Assignment Sheets.

R Show the video *Judging Halter Horses*, #102.

O Show one or more of the videos *Practice Horse Judging: Halter I, II, and III* (#110, #115, #116) if students need more practice judging.

OBJECTIVE 11

Prepare oral reasons. (Assignment Sheet 2)

R See the general instructions for all Assignment Sheets.

OBJECTIVE 12

Present oral reasons. (Assignment Sheet 3)

R See the general instructions for all Assignment Sheets.

EVALUATION

Pretest

- Use the unit Written Test for *both* the pretest and posttest. Give the students the pretest before they begin the unit.

- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving pretests and using the results. Information for ordering this material is included in the optional resources section.

- Use pretest results to guide individual students in progressing through the unit, doing enrichment work, or moving to the next unit.

Focus Assignment

- Use an informal evaluation of the focus assignments as a diagnostic tool for determining if any students need extra help in reading comprehension or writing skills. Refer these students to their English instructor, Learning Resource Center, or Educational Enhancement Center.

Assignment Sheet

- Evaluate students on Assignment Sheet activities. Students must repeat an Assignment Sheet until they have mastered the activity.

- Complete each student's Competency Profile.

Skill Test

- Explain to the students that they will be asked to demonstrate the procedures on the Job Sheets as a skills test.

- Describe the rating scale used on the skills test.

- Reteach and retest as necessary.
- Complete each student's Competency Profile.

Posttest

- After they have completed the unit, give students the Written Test again.
- Explain to the students that they will be asked to demonstrate on the Written Test actions listed in the specific objectives.
- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving posttests and using the results. Information for ordering this material is included in the optional resources section.
- Reteach and retest as necessary to meet individual student needs and state standards for student learning and competency gains.
- Complete the appropriate sections of the Competency Profiles.
- Review individual and group performance to evaluate teaching effectiveness. Adjust scope, sequence, or instructional methods for additional lessons as required.

REQUIRED RESOURCES

The items marked with an asterisk are included in the Instructor's Resource Package.

Publications

- *Form Follows Function.* Handout.*

Videos

- *Judging Halter Horses, #102.* Lubbock, TX: Creative Educational Video, Inc., n.d.

  ☑ **NOTE:** This video is included in the Media Package available through CIMC.

OPTIONAL RESOURCES

Publications

- Evans, J. Warren. *Horses: A Guide to Selection, Care, and Enjoyment, (2nd ed.).* New York: W.H. Freeman and Company, 1989.
- *Measuring Learning and Competency Gains: The Pretest/Posttest Approach.* Stillwater, OK: CIMC, Oklahoma Department of Vocational and Technical Education, 1992. For ordering information call 800-522-5810.

Videos

- *Practice Horse Judging: Halter I, II, and III* (#110, #115, #116). Lubbock, Texas: Creative Educational Video.

UNIT REFERENCES

Publications

- *Equine Science.* College Station, TX: Texas A&M University, Instructional Materials Service, 1990.
- Evans, J. Warren. *Horses: A Guide to Selection, Care, and Enjoyment, (2nd ed.).* New York: W.H. Freeman and Company, 1989.

Videos

- *Judging Halter Horses, #102.* Lubbock, Texas: Creative Educational Video.

ASSIGNMENT SHEETS

OBJECTIVE 10

Assignment Sheet 1

Students should have viewed the video *Judging Halter Horses*.

OBJECTIVE 11

Assignment Sheet 2

Students should have filled in the form for preparing oral reasons with their placings from the video. Answers will vary but the preparation should be clear and give detail about why the students placed a certain way.

OBJECTIVE 12

Assignment Sheet 3

Students should present their oral reasons with good speaking techniques. Students should be able to clearly explain why they placed a certain way.

WRITTEN TEST

OBJECTIVE 1

Answers should include the following in any order:

1. Balance – how a horse's parts fit together in proportion to one another; four ways to evaluate balance:
    - Side view – divide horse into thirds
    - Depth of body – relative to length of leg
    - Height at withers and croup
    - Same width across shoulders as across hips

2. Structural correctness – evaluate neck, shoulder, withers, width of chest, upper leg, lower leg, back and loin, croup, hip, hind leg

3. Quality – denotes refinement, condition and sex character (masculinity and femininity); also the physical aspects of the following body parts: head, neck, hair coat, cleanness of bone, freedom from blemishes

4. Muscling – varies from breed to breed; three factors affect muscling:
   - Length
   - Overall size or volume
   - Definition or Expression

5. Breed type/character – varies from breed to breed; factors to consider:
   - Quality of head/neck
   - Volume and pattern of muscling
   - Overall size and substance

6. Tracking (Way of Going/Travel) – indication of quality of movement, correctness of movement, soundness or unsoundness

OBJECTIVE 2

1. Long, narrow, Roman-nosed
2. Medium sized; erect, clean cut, set well apart
3. Pig-eyed; glass-eyed
4. Small
5. Parrot-mouthed; undershot
6. Rather long and trim with trim throatlatch
7. Too rounded; mutton-withered
8. Straight with proportionate length
9. Short, heavy muscling
10. Too steep; too level
11. Too narrow; too wide
12. Short, straight, and steep
13. Long
14. Wide, thick, deep, and clean cut
15. Cow-hocked; open in hocks; rotating hocks; sickle-hocked
16. Flat with substance; short in comparison to forearm
17. Clean-cut
18. Too straight, coon-footed
19. Too small; too large

OBJECTIVE 3

Answer should include the following:

VIEWING FROM THE SIDE

- Stature and scale
- Length
- Depth of heart girth and flank
- Carriage and shape of head and neck
- Shortness of back and coupling
- Levelness of top line
- Length and straightness of underline
- Height and shape of withers
- Length and slope of shoulder
- Position and conformation of knees

- Turn of croup
- Set of tail

VIEWING FROM THE FRONT

- Muscling
- Temperament and disposition
- Features of the head
- Width and depth of chest
- Position and conformation of forelegs and feet

VIEWING FROM THE REAR

- Width and roundness of hips
- Fullness of thigh and quarters
- Position and conformation of hind legs

VIEWING THE HORSE WHILE TRAVELING

- Length of stride
- Directness
- Promptness
- Height
- Spring
- Regularity
- Straightness of movement of feet and legs

VIEWING AT CLOSE INSPECTION

- Unsoundness
- Muscling
- Quality of feet and legs
- Withers

OBJECTIVE 4 1, 2, 3, 5, 6, 8, 10, 11, 13, 14 15

OBJECTIVE 5

1. B
2. D
3. K
4. I
5. H
6. A
7. L
8. F

OBJECTIVE 6 Chart should be filled in as shown below.

Unsoundness or Defect	Disqualification	Discrimination	Serious Discrimination
Blindness	X		
Bone spavin	X		
Capped hock		X	
Filled hocks		X	
Bog spavin			X
Cocked ankles			X
Hip down	X		
Undershot mouth			X
Parrot mouth			X
Stifled	X		
Bowed tendon			X
Cracked feet		X	
Broken wind	X		
Curb		X	
Stringhalt	X		

OBJECTIVE 7 Answer should include the following in any order:

- Make notes identifying each horse in the class.
- Develop a chart with placing, reasons, grants, and faults.

OBJECTIVE 8

Answer should include the following in any order:

- Make reasons easily understood by the official judge.
- Compare horses rather than describing them.
- Arrange class into three pairs: top, middle, and bottom.
- Stress strong points of the top horse in each pair and then admit or grant any way that the bottom horse in each pair may excel; repeat the same order for the second and third pair.
- Start your reasons by saying, "I placed this class of (age), (breed), (sex)" and then give placings.
- Describe horses in logical sequence.
- Conclude by saying, "For these reasons, I placed this class of (age), (breed), (sex)" and then your placings.

OBJECTIVE 9

Answer should include the following points:

- Two minutes are allowed for giving out oral reasons.
- Notes will not be used while giving reasons, but placing card may.
- Voice should be clear and reasons concise, using correct terminology.
- Stance should be square and on both feet.
- Eye contact should be directed toward the person listening to reasons.
- Delivery of reasons should be in a convincing, truthful, and easily understood manner.
- Emphasis should be placed on major differences between horses, stressing the comparisons in which the top animal in each pair is superior.
- Upon conclusion, thank the individual for listening to reasons and leave.

OBJECTIVE 10 **Evaluated on Assignment Sheet 1.**

OBJECTIVE 11 **Evaluated on Assignment Sheet 2.**

OBJECTIVE 12 **Evaluated on Assignment Sheet 3.**

CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) EQUINE MANAGEMENT AND PRODUCTION

UNIT NUMBER AND TITLE E2 – JUDGING

TOTAL NUMBER OF TEST QUESTIONS 78

TOTAL NUMBER OF BASIC SKILL QUESTIONS 32

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
1	1-6	X
2	1-19	S
3	1-5	W
4	1-15	X
5	1-8	X
6	1-15	X
7	1, 2	X
8	1-7	W
9	1	W
10	Evaluated on AS 1	
11	Evaluated on AS 2	
12	Evaluated on AS 3	

INSTRUCTOR'S GUIDE

TRANSPORTING THE HORSE

F1

Required Activities and Resources (R)

These are fully integrated components of this CIMC curriculum. They are usually packaged in or with the curriculum and are essential in meeting the learning objectives. To individualize this unit, use the LAP Sheet supplied in your resources.

- Reproducible Handouts and Transparency Masters are included in the Instructor's Resource Package. Handouts should be copied for all students. Transparency Masters should be used to make overhead transparencies for using during instruction. A small copy of each Transparency Master appears in the student's Information Sheets.
- Non-reproducible resources are included in the student's curriculum.

Optional Activities and Resources (O)

These are suggested high-interest activities to help deliver learning objectives to students or to let students achieve objectives in an applied context. Select as many as you wish to use. Some activities use extra resources for further information about the unit content. You can make them available in the classroom for in-depth study or optional activities, but their use is not required for meeting CIMC unit objectives.

FOCUS ASSIGNMENTS

Prereading

R Have the students read the Handout *I Knew Not To Do That.*

Writing

R Have the students write a short explanation of what the individuals did incorrectly and how they might correct their mistakes.

GENERAL INSTRUCTIONS

Assignment Sheets

R Review the directions and any specific guidelines.

R Make certain that any needed materials from the Instructor's Resource Package are available.

R Have the students complete the Assignment Sheet. Evaluate each student's performance and provide reteaching and retesting as necessary. Have the students repeat the Assignment Sheet until they achieve mastery.

R Complete each student's Competency Profile.

O Have students volunteer to read aloud the directions and any special guidelines.

O Return the completed Assignment Sheets to the students so that they may use them for later reference if needed.

Job Sheets

R Review the introduction and evaluation criteria for the Job Sheet. Remind the students that they should not fill in the blanks in the Yes/No columns.

R Review and explain all general guidelines, safety cautions, and warnings.

R Make sure that all tools, equipment, and supplies are available.

R Demonstrate each of the procedures outlined in the Job Sheet.

R Allow the students to practice the Job Sheet skills before skills testing. Coach, correct, and supervise as necessary.

R Have the students complete the Job Sheet. Evaluate each student's performance and provide remediation as necessary. Have the students repeat the Job Sheet until they achieve mastery.

R Complete each student's Competency Profile.

R Return the completed Job Sheet to the students so that they may use them for later reference if needed.

O Have the students volunteer to read aloud the job guidelines, cautions, and warnings.

LAP Sheets

The LAP Sheets are an optional component that can be used to individualize instruction. The following instructions should be followed only if you are using the LAP Sheets.

R Explain the specific procedures to be followed to the students before they begin using the LAP Sheet. Be sure that each student understands the procedures for using the LAP Sheet.

R If you want the student to complete any of the assignments on the LAP Sheet that are labeled optional, assign these to the student. Be sure to provide any needed resources.

OBJECTIVE 1

List ways to transport the horse.

O Give students examples of different types of trailers such as two-horse trailers, in lines, stock trailers, and slant loads.

O Show students ads or photos of different types of horse trailers.

OBJECTIVE 2

Select from a list precautions to take before transporting the horse.

O Discuss why these precautions should be taken.

OBJECTIVE 3

List items of trailer maintenance.

O Emphasize the importance of trailer maintenance. Discuss what can happen if a trailer is not maintained.

O Demonstrate to students the proper way to check the items listed for trailer maintenance. Ask several students to demonstrate the proper way to check the items.

OBJECTIVE 4

Discuss factors to consider while driving and transporting the horse.

O Emphasize the importance of driving safely while transporting horses.

OBJECTIVE 5

Select from a list equipment needed for hauling.

O Ask students if there are other items or equipment that would be appropriate to have when hauling. Examples might include:

- Emergency reflector cones or triangles if trailer has to stop on the road at night
- First aid kit for both horses and people
- Automotive equipment such as jumper cables
- Maps
- Important phone numbers (such as veterinarian)

OBJECTIVE 6

List health requirements necessary for interstate travel.

O Show students examples of a coggins exam certificate and certificate of veterinary inspection.

O Discuss that each state has different requirements for interstate travel. It is advisable to check with the State Veterinarian at your destination.

OBJECTIVE 7

Wrap a horse's legs. (Job Sheet 1)

R See the general instructions for all Job Sheets.

O Show students examples of shipping boots and discuss that shipping boots can be used for trailering horses. Demonstrate putting shipping boots on a horse. Ask several students to demonstrate putting the shipping boots on a horse.

O Show the video *Bandaging Techniques for Horses.*

O Emphasize that there are many different types of bandaging materials available.

OBJECTIVE 8

Wrap a horse's tail. (Job Sheet 2)

R See the general instructions for all Job Sheets.

OBJECTIVE 9

Load a horse. (Job Sheet 3)

R See the general instructions for all Job Sheets.

O Show the video *Leading and Loading Safely.*

EVALUATION

Pretest

- Use the unit Written Test for *both* the pretest and posttest. Give the students the pretest before they begin the unit.

- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving pretests and using the results. Information for ordering this material is included in the optional resources section.

- Use pretest results to guide individual students in progressing through the unit, doing enrichment work, or moving to the next unit.

Focus Assignment

- Use an informal evaluation of the focus assignments as a diagnostic tool for determining if any students need extra help in reading comprehension or writing skills. Refer these students to their English instructor, Learning Resource Center, or Educational Enhancement Center.

Assignment Sheet

- Evaluate students on Assignment Sheet activities if not previously done. Students must repeat an Assignment Sheet until they have mastered the activity.

- Complete each student's Competency Profile.

Skill Test

- Explain to the students that they will be asked to demonstrate the procedures on the Job Sheets as a skills test.

- Describe the rating scale used on the skills test.

- Reteach and retest as necessary.

- Complete each student's Competency Profile.

Posttest

- After they have completed the unit, give students the Written Test again.
- Explain to the students that they will be asked to demonstrate on the Written Test actions listed in the specific objectives.
- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving posttests and using the results. Information for ordering this material is included in the Optional Resources section.
- Reteach and retest as necessary to meet individual student needs and state standards for student learning and competency gains.
- Complete the appropriate sections of the Competency Profiles.
- Review individual and group performance to evaluate teaching effectiveness. Adjust scope, sequence, or instructional methods for additional lessons as required.

REQUIRED RESOURCES

The items marked with an asterisk are included in the Instructor's Resource Package.

Publications

- *I Knew Not To Do That.* Handout on loading scenarios.*

OPTIONAL RESOURCES

Publications

- Evans, J. Warren. *Horses: A Guide to Selection, Care, and Enjoyment.* New York: W.H. Freeman and Company, 1989.
- *Measuring Learning and Competency Gains: The Pretest/Posttest Approach.* Stillwater, OK: CIMC, Oklahoma Department of Vocational and Technical Education, 1992. For ordering information call 800-522-5810.

Videos

- *Bandaging Techniques for Horses.* Santa Monica, CA: Equestrian Video Library, 1986.

- *Leading and Loading Safely.* The John Lyons Series. Produced by Horseman's Video Showcase, 21415 Cypresswood, Humble, TX 77338, for Farnam Companies, Inc., 1989.

UNIT REFERENCES

Publications

- *Equine Science.* College Station, TX: Instructional Materials Service, Texas A&M University, 1990.
- Evans, J. Warren. *Horses: A Guide to Selection, Care, and Enjoyment*, (2nd ed.). New York: W.H. Freeman and Company, 1989.
- Hawcroft, Tim. *The Complete Book of Horse Care.* New York: Howell Book House, 1992.

Videos

- *Bandaging Techniques for Horses.* Santa Monica, CA: Equestrian Video Library, 1986.
- *Leading and Loading Safely.* The John Lyons Series. Produced by Horseman's Video Showcase, 21415 Cypresswood, Humble, TX 77338, for Farnam Companies, Inc., 1989.

WRITTEN TEST

OBJECTIVE 1

Answers should include the following information in any order:

- Trailer
- Van
- Train
- Ship
- Plane

OBJECTIVE 2

1, 2, 4, 7, 8, 9, 10

OBJECTIVE 3

Answers should include the following in any order:

- Check the tires.
- Check the floor boards before loading.
- Check the brake lights, turn signals, and running lights.
- Check the spare tire.
- Make sure the hitch and the latches are secured.
- Oil the hitch mechanism regularly.
- Pack the wheel bearings annually or every 10,000 miles.
- Keep the trailer washed and waxed to prevent rust.

OBJECTIVE 4

Answer should include the following points:

- Drive at a moderate, constant, and safe speed.
- Avoid quick starts and stops.
- Use light application of brakes; consider stopping distance.
- Avoid taking sharp curves too fast.
- Take into consideration state laws, signs, amount and speed of traffic, and weather conditions.

OBJECTIVE 5

1, 3, 4, 6

OBJECTIVE 6

Answers should include the following in any order:

- Negative Coggins test
- Certificate of Veterinary Inspection

OBJECTIVE 7

Evaluated on Job Sheet 1.

OBJECTIVE 8

Evaluated on Job Sheet 2.

OBJECTIVE 9

Evaluated on Job Sheet 3.

CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) EQUINE MANAGEMENT AND PRODUCTION

UNIT NUMBER AND TITLE F1 – TRANSPORTING THE HORSE

TOTAL NUMBER OF TEST QUESTIONS 27

TOTAL NUMBER OF BASIC SKILL QUESTIONS 3

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
1	**1-5**	**X**
2	**1-10**	**X**
3	**1-8**	**X**
4	**1**	**W**
5	**1-6**	**X**
6	**1, 2**	**U**
7	**Evaluated on JS 1**	
8	**Evaluated on JS 2**	
9	**Evaluated on JS 3**	

INSTRUCTOR'S GUIDE

PHYSICAL FACILITIES AND STABLE MANAGEMENT

G1

Required Activities and Resources (R)

These are fully integrated components of this CIMC curriculum. They are usually packaged in or with the curriculum and are essential in meeting the learning objectives. To individualize this unit, use the LAP Sheet supplied in your resources.

- Reproducible Handouts and Transparency Masters are included in the Instructor's Resource Package. Handouts should be copied for all students. Transparency Masters should be used to make overhead transparencies for using during instruction. A small copy of each Transparency Master appears in the student's Information Sheets.

- Non-reproducible resources are included in the student's curriculum.

Optional Activities and Resources (O)

These are suggested high-interest activities to help deliver learning objectives to students or to let students achieve objectives in an applied context. Select as many as you wish to use. Some activities use extra resources for further information about the unit content. You can make them available in the classroom for in-depth study or optional activities, but their use is not required for meeting CIMC unit objectives.

FOCUS ASSIGNMENTS

Prereading

R Have students read the Handout *Different Needs, Different Facilities.*

Writing

R Have the students write a short (one paragraph) summary of how the facilities meet the needs of each case. Have students include the advantages and disadvantages of each type of facility.

GENERAL INSTRUCTIONS

Assignment Sheets

R Review the directions and any specific guidelines.

R Make certain that any needed materials from the Instructor's Resource Package are available.

R Have the students complete the Assignment Sheet. Evaluate each student's performance and provide reteaching and retesting as necessary. Have students repeat the Assignment Sheet until they achieve mastery.

R Complete each student's Competency Profile.

O Have the students volunteer to read aloud the directions and any special guidelines.

O Return the completed Assignment Sheets to the students so that they may use them for later reference if needed.

Job Sheets

R Review the Introduction and Evaluation Criteria for the Job Sheet. Remind the students that they should not fill in the blanks in the Yes/No columns.

R Review and explain all general guidelines, safety cautions, and warnings.

R Make sure that all tools, equipment, and supplies are available.

R Demonstrate each of the procedures outlined in the Job Sheet.

R Allow the students to practice the Job Sheet skills before skills testing. Coach, correct, and supervise as necessary.

R Have the students complete the Job Sheet. Evaluate each student's performance and provide remediation as necessary. Have the students repeat the Job Sheet until they achieve mastery.

R Complete each student's Competency Profile.

R Return the completed Job Sheet to the students so that they may use them for later reference if needed.

O Have the students volunteer to read aloud the job guidelines, cautions, and warnings.

LAP Sheets

The LAP Sheets are an optional component that can be used to individualize instruction. The following instructions should be followed only if you are using the LAP Sheets.

R Explain the specific procedures to be followed to the students before they begin using the LAP Sheet. Be sure that each student understands the procedures for using the LAP Sheet.

R If you want the student to complete any of the assignments on the LAP Sheet that are labeled optional, assign these to the student. Be sure to provide any needed resources.

OBJECTIVE 1

List steps in planning a facility.

O Show the appropriate sections from the video *Facility Considerations for Horse Farms.*

O Discuss why each step is important.

OBJECTIVE 2

List factors to consider in the location of the facility.

O Show the appropriate sections from the video *Facility Considerations for Horse Farms.*

O Discuss the location of horse facilities in your area. Ask students for advantages/disadvantages of the locations.

OBJECTIVE 3

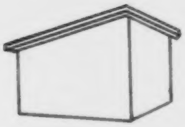
List factors to consider in the design and construction of a facility.

O Show the appropriate sections from the video *Facility Considerations for Horse Farms.*

O Discuss the design and construction of horse facilities in your area. Ask students for advantages/disadvantages of the facilities. If there are limited facilities for horses locally, use examples illustrated in publications about horses to help with the discussion.

Discuss the different styles of barns as determined by the shape of their roof.

EXAMPLES: Shed, gable, offset gable, and monitor.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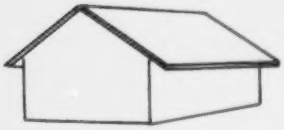
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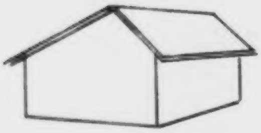
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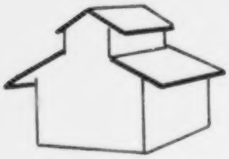
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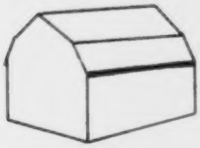
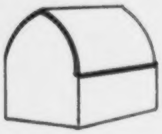

Gambrel


Gothic

OBJECTIVE 4

Describe recommended environmental conditions for mature horses.

Discuss recommended environmental conditions. Emphasize that these are only "optimums" and that horses are very adaptable and can live in many different types of environments.

OBJECTIVE 5

Complete a chart on recommended stall sizes.

O Show the appropriate sections from the video *Facility Considerations for Horse Farms.*

OBJECTIVE 6

Select from a list characteristics of stall construction.

O Show the appropriate sections from the video *Facility Considerations for Horse Farms.*

OBJECTIVE 7

Select from a list conditions which determine the storage space requirements for feed and bedding.

O Show the appropriate sections from the video *Facility Considerations for Horse Farms.*

OBJECTIVE 8

Select from a list types of bedding.

O Show students examples of different types of bedding.

OBJECTIVE 9

Describe sanitation requirements of horse facilities.

O Emphasize the importance of sanitation. Discuss problems such as parasites that can be caused by poor sanitation.

OBJECTIVE 10

Draw plans for a horse facility. (Assignment Sheet 1)

R See the general instructions for all Assignment Sheets.

R Give students sample plans to examine. Information on ordering plans is given in the required resources section.

OBJECTIVE 11

List types of fences used for horses.

O Show the appropriate sections from the video *Facility Considerations for Horse Farms.*

O Discuss types of fencing used in your area. Emphasize that although barbed wire may be commonly used it is NOT a good fencing for horses because of the risk of injury.

OBJECTIVE 12

List advantages of good fences.

O Discuss advantages of good fences.

OBJECTIVE 13

Analyze fencing requirements for horses. (Assignment Sheet 2)

R See the general instructions for all Assignment Sheets.

EVALUATION

Pretest

- Use the unit Written Test for *both* the pretest and posttest. Give the students the pretest before they begin the unit.
- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving pretests and using the results. Information for ordering this material is included in the optional resources section.
- Use pretest results to guide individual students in progressing through the unit, doing enrichment work, or moving to the next unit.

Focus Assignment

- Use an informal evaluation of the focus assignments as a diagnostic tool for determining if any students need extra help in reading comprehension or writing skills. Refer these students to their English instructor, Learning Resource Center, or Educational Enhancement Center.

Assignment Sheet

- Evaluate students on Assignment Sheet activities if not previously done. Students must repeat an Assignment Sheet until they have mastered the activity.
- Complete each student's Competency Profile.

Skill Test

- Explain to the students that they will be asked to demonstrate the procedures on the Job Sheets as a skills test.

- Describe the rating scale used on the skills test.
- Reteach and retest as necessary.
- Complete each student's Competency Profile.

Posttest

- After they have completed the unit, give students the Written Test again.
- Explain to the students that they will be asked to demonstrate on the Written Test actions listed in the specific objectives.
- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving posttests and using the results. Information for ordering this material is included in the optional resources section.
- Reteach and retest as necessary to meet individual student needs and state standards for student learning and competency gains.
- Complete the appropriate sections of the Competency Profiles.
- Review individual and group performance to evaluate teaching effectiveness. Adjust scope, sequence, or instructional methods for additional lessons as required.

REQUIRED RESOURCES

The items marked with an asterisk are included in the Instructor's Resource Package.

Publications

- *Different Needs, Different Facilities.* Handout on horse facilities.*

- Sample plans for horse facilities. Obtain sample plans from:

Plans and Building Information Service
214 Agricultural Hall
Oklahoma State University
Stillwater, OK 74078-0469

Plan Service office (405) 744-5425

☞ **NOTE:** A form letter for obtaining plans is included with the Instructor's Resource Package. The form letter may be copied on to letterhead.

OPTIONAL RESOURCES

Publications

- Gralla, Stan. *Horseman's Architect.* Oklahoma City, OK: Speedhorse, Inc., 1981.
- *Horse Handbook: Housing and Equipment.* Ames, IA: Midwest Plan Service, Iowa State University, 1971.
- *Measuring Learning and Competency Gains: The Pretest/Posttest Approach.* Stillwater, OK: CIMC, Oklahoma Department of Vocational and Technical Education, 1992. For ordering information call 800-522-5810.

Videos

- *Facility Considerations for Horse Farms.* Stillwater, OK: Oklahoma State University Cooperative Extension Service.

☞ **NOTE:** Contact your local Oklahoma Cooperative Extension Service office for information on this video.

UNIT REFERENCES

Publications

- *Equine Science.* College Station, TX: Instructional Materials Service, Texas A&M University, 1990.
- Evans, J. Warren. *Horses: A Guide to Selection, Care, and Enjoyment, (2nd ed.).* New York: W.H. Freeman and Company, 1989.

- Gralla, Stan. *Horseman's Architect.* Oklahoma City, OK: Speedhorse, Inc., 1981.

- *Horse Handbook: Housing and Equipment.* Ames, Iowa: Midwest Plan Service, Iowa State University, 1971.

Videos

- *Facility Considerations for Horse Farms.* Oklahoma State University Cooperative Extension Service, Stillwater, OK.

ASSIGNMENT SHEETS

OBJECTIVE 10

Assignment Sheet 1

Student answers will vary. Students should submit a sample horse facility plan and include a brief discussion of the facility.

Assignment Sheet 2

Student answers will vary. Students should support their choice of fencing for the cases and take into account such things as appearance, cost, and use.

WRITTEN TEST

OBJECTIVE 1

Answers should include the following:

1. Identify needs and objectives of the facility.
2. Analyze and select the site.
3. Fit the operation to the site.
4. Design and construct the facility.

OBJECTIVE 2

Answer should include the follow in any order:

- Topography
- Zoning
- Water availability
- Drainage

- Utilities
- Accessibility
- Expandibility

OBJECTIVE 3

Answer should include the following in any order:

- Building codes
- Style/size of building
- Material selection
- Lighting
- Fire protection
- Sanitary considerations and pest control
- Cost
- Flexibility
- Protection from extreme temperatures and weather
- Adequate stall space
- Ventilation
- Areas for grooming, exercise, pastures, and paddocks

OBJECTIVE 4

Answers should include the following:

- Temperature – 45°-75° F with an optimum of 55° F
- Humidity – 50-75%
- Ventilation rates – 60 cu ft/min in the winter and 160 cu ft/min in the summer for a 1000 lb horse
- Drinking water – 40°-45° F in the winter and 60°-75° F in the summer

OBJECTIVE 5

Chart should be completed as shown below:

TYPE OF HORSE	STALL SIZE
Riding horses	12 X 12
Stallions	14 X 14
Weanlings	10 X 10
Yearlings	10 X 10
Foaling	16 X 16
Isolation	12 X 12

OBJECTIVE 6

1, 4, 5, 6, 8, 9, 11

OBJECTIVE 7

1, 2, 4, 5, 7, 9, 10

OBJECTIVE 8

2, 3, 4, 5, 7, 9, 10

OBJECTIVE 9

Answer should include the following requirements:

- Clean waterers and feed troughs regularly.
- Do NOT feed hay on the stall floor.
- Remove manure from stalls daily.
- Store feed in rodent-proof containers.
- Control insect population (especially fly population).
- Keep horse facility neat and clean.

OBJECTIVE 10

Evaluated on Assignment Sheet 1.

OBJECTIVE 11

Answer should include the following in any order:

- Steel pipe and rail
- Steel posts and steel cable
- Wooden posts and boards
- Wooden posts and poles
- Wooden posts and woven wire
- Wire
- PVC plastic
- Electric fence

OBJECTIVE 12

Answers should include the following in any order:

- Maintain boundaries
- Reduce losses of crops and injuries to animals
- Increase property values
- Promote good relationship between neighbors
- Protect animals from roadways
- Add to the attractiveness of the premises

OBJECTIVE 13

Evaluated on Assignment Sheet 2.

CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) EQUINE MANAGEMENT AND PRODUCTION

UNIT NUMBER AND TITLE G1 – PHYSICAL FACILITIES AND STABLE MANAGEMENT

TOTAL NUMBER OF TEST QUESTIONS 78

TOTAL NUMBER OF BASIC SKILL QUESTIONS 2

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
1	1-4	X
2	1-7	X
3	1-12	X
4	1	W
5	1-6	X
6	1-12	X
7	1-10	X
8	1-10	X
9	1	W
10	Evaluated on AS 1	
11	1-8	X
12	1-6	X
13	Evaluated on AS 2	

INSTRUCTOR'S GUIDE

SELECTION AND CARE OF TACK AND EQUIPMENT

H1

Required Activities and Resources (R)

These are fully integrated components of this CIMC curriculum. They are usually packaged in or with the curriculum and are essential in meeting the learning objectives. To individualize this unit, use the LAP Sheet supplied in your resources.

- Reproducible Handouts and Transparency Masters are included in the Instructor's Resource Package. Handouts should be copied for all students. Transparency Masters should be used to make overhead transparencies for use during instruction. A small copy of each Transparency Master appears in the student's Information Sheets.
- Non-reproducible resources are included in the student's curriculum.

Optional Activities and Resources (O)

These are suggested high-interest activities to help deliver learning objectives to students or to let students achieve objectives in an applied context. Select as many as you wish to use. Some activities use extra resources for further information about unit content. You can make them available in the classroom for in-depth study or optional activities, but their use is not required for meeting CIMC unit objectives.

FOCUS ASSIGNMENTS

Prereading

R Have the students read the Handout *Different Tack for Different Uses.*

Writing

R Have the students write a short discussion on the different uses of tack.

O Bring in various catalogs with tack and let students look through the catalogs. Discuss what different items of tack are used for.

GENERAL INSTRUCTIONS

Assignment Sheets

R Review the directions and any specific guidelines.

R Make certain that any needed materials from the Instructor's Resource Package are available.

R Have the students complete the Assignment Sheet. Evaluate each student's performance and provide reteaching and retesting as necessary. Have the students repeat the Assignment Sheet until they achieve mastery.

R Complete each student's Competency Profile.

O Have the students volunteer to read aloud the directions and any special guidelines.

O Return the completed Assignment Sheets to the students so that they may use them for later reference if needed.

Job Sheets

R Review the introduction and evaluation criteria for the Job Sheet. Remind the students that they should not fill in the blanks in the Yes/No columns.

R Review and explain all general guidelines, safety cautions, and warnings.

R Make sure that all tools, equipment, and supplies are available.

R Demonstrate each of the procedures outlined in the Job Sheet.

R Allow the students to practice the Job Sheet skills before skills testing. Coach, correct, and supervise as necessary.

R Have the students complete the Job Sheet. Evaluate each student's performance and provide remediation as necessary. Have the students repeat the Job Sheet until they achieve mastery.

R Complete each student's Competency Profile.

R Return the completed Job Sheets to the students so that they may use them for later reference if needed.

O Have the students volunteer to read aloud the job guidelines, cautions, and warnings.

LAP Sheets

The LAP Sheets are an optional component that can be used to individualize instruction. The following instructions should be followed only if you are using the LAP Sheets.

- R Explain the specific procedures to be followed to the students before they begin using the LAP Sheet. Be sure that each student understands the procedures for using the LAP Sheet.
- R If you want the student to complete any of the assignments on the LAP Sheet that are labeled optional, assign these to the student. Be sure to provide any needed resources.

OBJECTIVE 1

List basic tack and equipment.

- O Show students examples of basic tack and equipment.
- O Explain to students that this list includes basic equipment only. Horse owners may want to add additional items.

OBJECTIVE 2

Label parts of the Western bridle.

- O Bring a Western bridle to class and point out the different parts. Ask students to identify the parts.

OBJECTIVE 3

Label parts of the Western saddle.

- O Bring a Western saddle to class and point out the different parts. Ask students to identify the parts.
- O Discuss the variations of the Western saddle. The Western saddle has been adapted for specialized uses such as roping and barrel racing.

OBJECTIVE 4

Label parts of the English bridle.

- O Bring an English bridle to class and point out the different parts. Ask students to identify the parts.

OBJECTIVE 5

Label parts of the English saddle.

- O Bring an English saddle to class and point out the different parts. Ask students to identify the parts.

O Explain to students that the racing saddle is an extreme variation of the English saddle. The racing saddle is small and lightweight.

OBJECTIVE 6

Identify types of bits.

O Bring examples of the different types of bits to class. Ask students to identify the bits. Discuss that bits act on one or more of the pressure points of the horse: the poll, nose, lips, chin, tongue, bars, and the roof of the mouth. The type of bit chosen should match the desired use of the horse, the horse's mouth, and the level of control desired.

O For further information refer to *Bits and Bitting Manual.*

O Show the video *The Bridle Bit - Bits and Bitting.*

OBJECTIVE 7

Identify artificial riding aids.

O Bring examples of the different types of artificial riding aids to class. Ask students to identify the artificial riding aids.

O Explain to students that natural riding aids such as the voice or leg pressure are extremely important in riding and training horses.

O For further information refer to *Bits and Bitting Manual.*

OBJECTIVE 8

Describe basic care of tack and equipment.

O State that it is important to properly care for tack and equipment. Tack and equipment is expensive and if properly taken care of can last for many years. Tack and equipment that is not properly taken care of can also create potential hazards for the user.

OBJECTIVE 9

Describe ways to store saddles and bridles.

O Explain the importance of properly storing saddles and bridles. They should not be thrown on the floor or left outside.

OBJECTIVE 10

Clean tack. (Job Sheet)

R See the general instructions for all Job Sheets.

EVALUATION

Pretest

- Use the unit Written Test for *both* the pretest and posttest. Give the students the pretest before they begin the unit.
- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving pretests and using the results. Information for ordering this material is included in the optional resources section.
- Use pretest results to guide individual students in progressing through the unit, doing enrichment work, or moving to the next unit.

Focus Assignment

- Use an informal evaluation of the focus assignments as a diagnostic tool for determining if any students need extra help in reading comprehension or writing skills. Refer these students to their English instructor, Learning Resource Center, or Educational Enhancement Center.

Assignment Sheet

- Evaluate students on Assignment Sheet activities. Students must repeat an Assignment Sheet until they have mastered the activity.
- Complete each student's Competency Profile.

Skill Test

- Explain to the students that they will be asked to demonstrate the procedures on the Job Sheets as a skills test.
- Describe the rating scale used on the skills test.
- Reteach and retest as necessary.
- Complete each student's Competency Profile.

Posttest

- After they have completed the unit, give students the Written Test again.
- Explain to the students that they will be asked to demonstrate on the Written Test actions listed in the specific objectives.

- You may wish to use the CIMC publication *Measuring Learning and Competency Gains: The Pretest/Posttest Approach* for instructions and suggestions on giving posttests and using the results. Information for ordering this material is included in the optional resources section.
- Reteach and retest as necessary to meet individual student needs and state standards for student learning and competency gains.
- Complete the appropriate sections of the Competency Profiles.
- Review individual and group performance to evaluate teaching effectiveness. Adjust scope, sequence, or instructional methods for additional lessons as required.

REQUIRED RESOURCES

The items marked with an asterisk are included in the Instructor's Resource Package.

Publications

- *Different Tack for Different Uses.* Handout.*

OPTIONAL RESOURCES

Publications

- Langdon, William G. Jr. *Bits & Bitting.* Colbert, WA: Langdon Enterprises, 1989.
- McBane, Susan. *The Illustrated Guide to Horse Tack.* David & Charles, 1992.
- *Measuring Learning and Competency Gains: The Pretest/Posttest Approach.* Stillwater, OK: CIMC, Oklahoma Department of Vocational and Technical Education, 1992. For ordering information call 800-522-5810.

Videos

- *A Little Horse Sense: Tack and Equipment Basics.* Pasadena, CA: A Little Horse Sense Videos.
- *The Bridle Bit - Bits and Bitting.* Stillwater, OK: Oklahoma State University Cooperative Extension Service.

☑ **NOTE:** For information on this video contact your local Oklahoma County Extension office.

UNIT REFERENCES

Publications

- *Equine Science.* College Station, TX: Instructional Materials Service, Texas A&M University, 1990.
- Evans, J. Warren. *Horses: A Guide to Selection, Care, and Enjoyment, (2nd ed.).* New York: W.H. Freeman and Company, 1989.
- Langdon, William G. Jr. *Bits & Bitting.* Colbert, WA: Langdon Enterprises, 1989.
- McBane, Susan. *The Illustrated Guide to Horse Tack.* David & Charles, 1992.

Videos

- *A Little Horse Sense: Tack and Equipment Basics.* Pasadena, CA: A Little Horse Sense Videos.

WRITTEN TEST

OBJECTIVE 1

Answer should include the following in any order:

TACK

- Halter
- Leads
- Saddle and saddle pad
- Bridle
- Grooming equipment
- Blankets

EQUIPMENT

- Water buckets or automatic waterers
- Wheelbarrow or muck bucket
- Shovel
- Manure fork
- Bedding
- Hay and grain feeder
- Hose
- Rake
- First aid kit

OBJECTIVE 2

A. Crownpiece
B. Brow Band
C. Throatlatch
D. Cheekpiece
E. Curb strap
F. Bit
G. Reins
H. Crownpiece
I. Throatlatch
J. Cheekpiece

OBJECTIVE 3

A. Horn
B. Pommel
C. Latigo carrier
D. D Ring
E. Latigo
F. Stirrup strap
G. Stirrup
H. Fender
I. Stirrup leather
J. Flank billet
K. Skirt
L. Upper flank skirt
M. Cantle
N. Seat
O. Fork

OBJECTIVE 4

A. Crownpiece or Headstall
B. Throatlatch
C. Curb Bit
D. Reins
E. Curb chain
F. Noseband or cavesson
G. Cheekpiece
H. Brow band

OBJECTIVE 5

A. Cantle
B. Panel
C. Tread or stirrup iron
D. Flap
E. Stirrup Leather
F. Knee Pad or knee roll
G. Stirrup bar
H. Pommel
I. Skirt
J. Seat

OBJECTIVE 6

1. Curb bit
2. Snaffle bit
3. Hackamore
4. Combination bit
5. Bosal
6. Combination bit

OBJECTIVE 7

1. Running martingale
2. Western spur
3. Standing martingale
4. Riding crop
5. English spur

OBJECTIVE 8

Answer should include the following points:

- Wipe tack with a damp cloth after each use.
- Remove any horse sweat from the tack.
- Use saddle soap and preservative on leather.
- Thoroughly clean the saddle at least once a year, twice a year if heavily used.
- Do NOT let tack drag on the ground when carrying it.
- Do NOT leave tack on the ground.
- Check tack before use and replace worn items quickly.

OBJECTIVE 9

Answer should include the following points:

- Western saddle - hang with a rope or place on a saddle rack
- English saddle - cover with a carrying case and place on a rack
- Bridles - Hang on a rack so that bridle reins will not get twisted

OBJECTIVE 10

Evaluated on the Job Sheet.

CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) EQUINE MANAGEMENT AND PRODUCTION

UNIT NUMBER AND TITLE H1 – SELECTION AND CARE OF TACK EQUIPMENT

TOTAL NUMBER OF TEST QUESTIONS 71

TOTAL NUMBER OF BASIC SKILL QUESTIONS 2

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
1	1-15	X
2	A-J	X
3	A-O	X
4	A-H	X
5	A-J	X
6	1-6	X
7	1-5	X
8	1	W
9	1	W
10	Evaluated on JS	

Equine
Management and Production

Instructional Supplement

Reading

Writing

Math

Science

Oral
Communication

Interpersonal
or Relating

Creative Thinking/
Problem Solving

Employability

Social Studies

Reading Comprehension

- If students have difficulty gaining factual information:
    - Remind students that they probably read for many reasons. One of these reasons is to learn new information. The reason you have for reading helps determine the way you read.
    - Have students discuss the different techniques they use when reading. Lead the discussion so that students realize that, when they read for fun, they may read quickly; they may skim some parts and read others more carefully. Reading for facts requires more care.
    - Suggest that one technique found to be successful includes the following steps:
        - Identify in advance what it is you want to learn. Be certain that before starting to read, you have a clear understanding of what you want to accomplish. It sometimes helps to list the questions to be answered.
        - If the material to be read includes a table of contents, study it to get an understanding of how the material is organized.
        - Scan through the material noting headings, highlighted information, illustrations, etc.
        - Read the material carefully. Take notes or highlight as you read, listing or marking the information you want to learn. Note key words and ideas.
        - Study your notes/highlighted material. Ask yourself if you found all you wanted to learn. If not, read the material again or locate another source for the information.
    - Tell students that they should find a personal technique for reading to learn factual information.
- If students have difficulty analyzing cause and effect:
    - Remind students that in today's society, we often want to know why something happened. Often, if we examine what is to be done, we will be able to determine in advance the effect or result of the action. This can help us repeat successes and avoid mistakes.
    - Provide opportunities for students to practice recognizing cause-and-effect relationships by using examples and questions like the following:

  - Melissa practiced many hours and won the contest. Why did Melissa win the contest? (She practiced many hours.) What was the result of practicing? (She won the contest.)
  - Phillip followed the directions carefully, so the model worked perfectly. What happened because Phillip followed the directions carefully? (The model worked perfectly.) Why did the model work perfectly? (Phillip followed the directions carefully.)

- ☐ Introduce "cause-and-effect analysis." Define it as a systematic tool for looking at effects and the causes that create or contribute to them. State that cause-and-effect analysis can be used (1) to identify and verify factors which are causing a problem, or (2) to identify factors that must appear in a successful solution to a problem (effect).

- ☐ Use the following steps for presenting cause-and-effect analysis:
  - Identify the effect to be analyzed. Write it out at one end of a large sheet of paper, or on the chalkboard. (Think of the effect as the head of a fish. Cause-and-effect diagrams are also known as "fishbones," due to their shape, or Ishikawa diagrams, after their inventor.)
  - Draw a horizontal line from the effect and across the paper or chalkboard. (This line becomes the "backbone" of the fish.) From this horizontal line, draw four slanting lines connected to the main line, two above and two below. (These lines are the "major bones" of the fish.)
  - At the end of each slanting line, write the classifications for the main factors that contribute to the effect: People, Procedures, Equipment, and Environment.
  - On each slanting line ("major bone"), ask students to identify the specific factors that may be causing the effect. Write the factors on the appropriate slanting line (People, Procedures, Equipment, or Environment) and parallel to the "backbone." Instruct students to use brainstorming or other method to identify these factors.
  - From the specific factors identified, ask students to identify the most significant factor(s). Then, have students gather more information to verify the factor's causal relationship to the effect.

- ☐ After students become comfortable recognizing simple cause-and-effect relationships, have them create their own examples.

- If students have difficulty drawing conclusions:
  - ☐ Remind students that when they analyze a situation, perform a job task, or even discuss a television show or movie, they will often be asked to demonstrate understanding by telling what happened and explaining why it happened.
  - ☐ Provide opportunities for students to practice drawing conclusions by describing events, such as a group of people crowded around a table that has a decorated cake with lighted candles on it, and asking them to decide what is happening. Have them explain why they reached that conclusion.
  - ☐ Provide opportunities for students to practice drawing conclusions. Present students with descriptions of events, or with photographs or drawings, and ask them to describe what is happening. Ask the student(s) to support each response.
  - ☐ Remind students that before they can draw conclusions, they must carefully observe what is happening and think about why it is happening. In more complex situations, it is often a good idea to take notes about possible conclusions as you work.

Research and Reference

- If students have difficulty using audiovisual media:
  - ☐ Review the operating procedures with the students.
  - ☐ Remind students that they can review testable information presented by audiovisual media as many times as necessary.
  - ☐ Provide troubleshooting guidelines for students. Encourage them to refer to reference booklets.
  - ☐ Provide information in a different style, i.e. print, lecture, etc.
- If students have difficulty using computer data bases:
  - ☐ Review search techniques with students.
  - ☐ Review operating procedures with students.
  - ☐ Provide troubleshooting guidelines for students. Encourage them to refer to reference booklets.

Functional Reading

- If students have difficulty interpreting forms and records:
    - Remind students that interpreting forms and records is a skill they will be practicing throughout life. We must read and interpret forms or records almost daily. Have students volunteer to identify the types of forms or records they will encounter or have already encountered.
    - Compare the interpretation of forms and records to reading a page. Each part of the form or record has a specific purpose. Suggest that, when they have a form or record to interpret, students should carefully study the headings and the sections within the form or record, as well as the key or any other information that will help in understanding the meaning of the form or record.
- If students have difficulty following written instructions:
    - Discuss the possible consequences of not following instructions precisely.
    - Review the *importance* of following written instructions. Give appropriate scenarios when written instructions are not followed or are not followed completely and correctly.
    - Discuss the *relationship* between the order of written instructions and the appropriate outcome. Emphasize the need to follow written instructions in their proper order. Use examples where the order of instructions in a sequence is critical to the outcome of the task.
    - Explain to students that one of the keys to following written directions successfully is to read the directions completely before actually beginning to follow them. Doing this ensures that you will not be surprised as you work through the steps. It also gives you an opportunity to ask questions about steps you do not understand.
    - Tell students that, after they have read the directions and understand what to do, they should go back to Step 1 and follow the directions step-by-step (without skipping any steps). Remind students that it is important to follow steps in order, even if they think they already know what to do.
- If students have difficulty interpreting graphics and symbols:
    - Remind students that interpreting a graphic is very similar to reading a page. Each part of the graphic or symbol has a meaning within the art.
    - Suggest that, when they have a graphic, chart, diagram, or table to interpret, they should carefully study the art and compare it to any similar pieces encountered. They should also study the key or any other information that will help in understanding the graphic.

  - Review the symbols being used. Discuss the purposes for each symbol. Discuss the importance of memorizing the symbols.
  - Discuss sample graphics and the purposes for each. Create or locate other examples of graphics and ask students to interpret them.
  - Explain the importance of correctly interpreting graphics and symbols. Describe possible consequences of incorrect interpretations.

- If students have difficulty using content area vocabulary:
  - Remind students that nearly every occupation or group uses words that have specific, specialized meanings to others in the same occupation or group. Have them name and define some content area, technical, or "slang" words with which they are familiar.
  - Explain that using content area or technical words makes it easier for people within groups or occupations to communicate ideas accurately. Remind students that often the same word may have a generic meaning to the majority of people, but a very specific meaning within an industry.
  - Review key terms and concepts, so that students hear, see, write, and say them.
  - Have students suggest ways to learn the meanings of the vocabulary specific to what they are studying. Provide opportunities for students to practice using the terminology they will need.

- If students have difficulty interpreting abbreviations/acronyms:
  - Present examples of appropriate abbreviations and/or acronyms. Use actual examples from specific sources, such as newspapers, books, and others.
  - Ask students to interpret the examples. Give hints, if needed.

Language

- If students have difficulty using standard grammar, spelling, and capitalization:
  - Discuss the importance of using standard grammar and correct spelling, punctuation, and capitalization. Include the fact that it is more difficult to read and understand incorrectly-written materials, and that readers will take correctly-written materials more seriously.

- List common errors in grammar, spelling, punctuation, and capitalization in materials written by your students. Review this list with the class or with individuals.
- Help students to develop a checklist to use as they write, edit, and proofread. Each student can personalize his or her own checklist by adding the items that present the most problems to him or her. If spelling is a problem, suggest that the student keep a personal dictionary of frequently used or misspelled words.
- Have students work with partners or in groups and review each others' writing. Allow time for students to discuss the comments with their partners or groups.
- Suggest that as students write or proofread their own writing, they circle or mark places where they are unsure of the correct grammar, punctuation, capitalization, or spelling. Provide materials (English grammar/mechanics books or style guides) or class time for students to review, revise, or correct their writing.

- If students have difficulty stating ideas clearly:
  - Remind students to determine in advance the ideas they want to convey and the audience they want to reach. Audience analysis is very important in presenting ideas clearly and appropriately.
  - State that audience analysis begins early, such as when students are doing their research. They must describe their intended audience and decide how to best present their ideas to that audience. Options for communicating with the audience include written reports, charts, graphs, diagrams, etc. Explain how the audience influences the way in which the information is presented (such as very simple text with pictures, for children; a great deal of background information, for people who know nothing about or very little about the subject; or, little background but more complex information, for experts).
  - Have students work with a partner or in a small group. Provide time for them to share ideas with each other and make suggestions for making ideas clearer.
  - Remind students that careful preplanning and the use of correct grammar, spelling, punctuation, and capitalization are especially important if their ideas are to be clearly understood by the intended audience.

Composition

- If students have difficulty using complete sentences:

    - ☐ Remind students that complete sentences should be used in all writing assignments requiring paragraphs. Discuss what makes a group of words a sentence. Have students practice recognizing complete sentences using either exercises from any grammar/language arts text or self-prepared sentence activities.

    - ☐ Have students volunteer to compose complete sentences using words or topics you suggest. Write the sentences on the board. Have other students analyze the sentences to determine if they are complete. If not, have a volunteer rewrite them as complete sentences.

    - ☐ Review the definition of "sentence fragment."

    - ☐ Ask students for the three things needed for a complete sentence: subject, verb, and complete thought.

    - ☐ Create samples of complete sentences and sentence fragments. For each sample, ask students whether each is a complete or fragmented sentence. Ask whether each sample answers the questions "who or what did something?" and "what happened?" For those samples identified as sentence fragments, ask students for one or more ways of completing the sentences. Continue until you are sure that students are comfortable with this method for determining if a sentence is complete.

    - ☐ Stress the importance of using complete sentences in all "sentence or paragraph" style writing.

- If students have difficulty constructing graphics and symbols:

    - ☐ Remind students that interpreting a graphic is very similar to reading a page. Each part of the graphic or symbol has a meaning within the art.

    - ☐ Suggest that, when they have a graphic, chart, diagram, or table to interpret, they should carefully study the art and compare it to any similar pieces encountered. They should also study the key or any other information that will help in understanding the graphic.

    - ☐ Review the symbols being used. Discuss the purposes for each symbol. Discuss the importance of memorizing the symbols.

    - ☐ Discuss sample graphics and the purposes for each. Create or locate other examples of graphics and ask students to interpret them.

    - ☐ Explain the importance of correctly interpreting graphics and symbols. Describe possible consequences of incorrect interpretations.

Functional Writing

- If students have difficulty completing forms and records:
  - Remind students to first decide what information is being requested. Examine the structure of the forms used. This saves time by identifying the needed information so that time will not be spent on unwanted information.
  - Tell students to plan responses carefully before putting them in a final form. If the responses call for sentence or paragraph information, it is always a good idea to write the response in rough draft form, then edit, proofread, and rewrite the draft in a final form. Stress the importance of accurate, legible records.
- If students have difficulty writing letters:
  - Review basic purposes of letters: to communicate and to achieve desired results. Give examples of letters with specific purposes.
    - Discuss the different formats for letters: block, modified block, simplified, etc.
    - Review the parts of the letter.
    - Review guidelines for typing/preparing letters.
  - Refer the student to a reference book for greater detail about letters such as *The Gregg Reference Manual* and others.

Data Analysis and Display

- If students have difficulty interpreting plans and blueprints:
  - Review the importance of interpreting the plans or blueprints correctly for the students' assignments.
  - Discuss the consequences of incorrect interpretations.
  - Suggest that students review the key to and the scale of the plans or blueprints.
  - Walk students through a practice assignment using plans or blueprints.

Functional Math

- If students have difficulty making measurements:
    - Remind students that a key to making accurate measurements is to understand the techniques used for the type of measurement being made.
    - Suggest that students ask questions such as: How should the measurement be recorded (nearest inch)? What should be used to make the measurement? Are there special instructions that should be followed? Understanding what is expected and what must be learned makes the measuring task easier.
    - Review what is to be measured, the tools to be used, and any special instructions to be followed. Allow students time to practice using and reading the tool or measuring device.
    - Review the units of measure in the English and metric systems, if appropriate.
    - Demonstrate the correct procedure for making the required measurement(s).
- If students have difficulty solving practical problems:
    - Review the problem-solving procedure associated with the problems they have been assigned.
    - Walk them through a practice problem.
    - Explain the importance of solving problems correctly and the consequences for solving the problems incorrectly.
    - Explain how the students' assignments fit into "the big picture" of the assignment and/or of the objectives of the unit.

General Science

- If students have difficulty using scientific instruments (litmus paper):
    - Discuss, demonstrate, and review the procedures. Provide more opportunities for students to practice using litmus paper.

Life Science

- If students have difficulty investigating/applying the principle of genetics/heredity:
    - Review the reasons we study genetics and heredity.
    - Review the principles important to the specific assignment.
    - Break the assignments into smaller portions and evaluate performance often.
- If students have difficulty investigating/applying the principles of anatomy/physiology (terminology):
    - Remind students that it is important in any area of work or study to have consistent ideas or principles. Apply this concept to directions such as left/right or north, south, east, and west. Discuss how hard it would be to give directions without these consistent terms.
- If students have difficulty investigating health issues:
    - Review the issues relevant to the specific assignment.
    - Explain the reasons for investigating the particular issues and why they are important to the students.
    - Provide practice assignment.
    - Break the assignments into smaller sections and evaluate performance frequently.

Oral Presentation

- If students have difficulty making persuasive presentations:
    - Review effective speaking techniques with students.
    - Ask students to give three reasons why persuading others to their point of view is important. Ask them what will happen if others are not persuaded.

- If students have difficulty using good speaking techniques:
    - Demonstrate good speaking techniques: speak in a voice loud enough to be heard, but not loud enough to be offensive.
    - Suggest that students practice before doing the actual presenting. Practicing in front of a mirror helps many presenters.
    - Discuss the importance of knowing their data so that the speech is smooth, without long pauses or frequent "uh's." Remind students to stress important facts by slowing down or speaking louder. It is also good to repeat or summarize important points.

Cognitive Activities

- If students have difficulty identifying underlying causes:
    - Introduce "cause-and-effect analysis." Define it as a systematic tool for looking at effects and the causes that create or contribute to them. State that cause-and-effect analysis can be used (1) to identify and verify factors which are causing a problem, or (2) to identify factors that must appear in a successful solution to a problem (effect).
    - Use the following steps for presenting cause-and-effect analysis:
        - Identify the effect to be analyzed. Write it out at one end of a large sheet of paper, or on the chalkboard. (Think of the effect as the head of a fish. Cause-and-effect diagrams are also known as "fishbones," due to their shape, or Ishikawa diagrams, after their inventor.)
        - Draw a horizontal line from the effect and across the paper or chalkboard. (This line becomes the "backbone" of the fish.) From this horizontal line, draw four slanting lines connected to the main line, two above and two below. (These lines are the "major bones" of the fish.)
        - At the end of each slanting line, write the classifications for the main factors that contribute to the effect: People, Procedures, Equipment, and Environment.
        - On each slanting line ("major bone"), ask students to identify the specific factors that may be causing the effect. Write the factors on the appropriate slanting line (People, Procedures, Equipment, or Environment) and parallel to the "backbone." Instruct students to use brainstorming or other methods to identify these factors.

        - From the specific factors identified, ask students to identify the most significant factor(s). Then, have students gather more information to verify the factor's causal relationship to the effect.

    - After students become comfortable recognizing simple cause-and-effect relationships, have them create their own examples.

- If students have difficulty analyzing/synthesizing information:

    - Define the terms "analyze" and "synthesize." Compare and contrast their meanings.

    - Remind them that to analyze they must break the information down into all its component parts in order to understand it.

    - Remind them that to synthesize information they should put all the component parts together in a way that makes the information usable.

    - Explain that it is usually necessary to learn about complex items or things by examining their make-up or parts, such as studying body structure by examining each individual system or studying auto mechanics by examining the different automobile systems.

    - Also explain that it is sometimes necessary to then study the whole item or thing by studying how the parts work together to make the whole item work. This examination helps us identify and compare the relationships the parts have with each other.

    - Help the students understand the concepts by asking what they would do if they turned on a light and nothing happened. Lead them to discuss that they would probably first check to see if the light was plugged in or if the bulb was burned out. Plugging it in or replacing the light bulb might make the light come back on.

    - Then ask the students what they would do if the light still didn't work. Lead them to the conclusion that they should check to see if all the electricity was off. If it is, they will have to think about what they know about the whole electrical system—what are its parts. Identifying the parts of the whole will help them identify the problem.

- If students have difficulty drawing conclusions:

    - Remind students that when they conduct an experiment, perform a job task, or discuss a subject, they will often be asked to draw conclusions. Give examples of such situations.

    - Explain that, before conclusions can be drawn, students must first observe carefully what is happening and why it may be happening. Suggest that, with complex experiments, a good set of notes taken while conducting the experiment can help in drawing conclusions.

  - Have students practice drawing conclusions. When possible, choose situations appropriate for the occupation or subject (such as an actual experiment, etc.). Or, use a general situation using photographs or a videotape without the volume. Ask students to state what is happening in each picture (their conclusion). Have students support their conclusions.

- If students have difficulty evaluating an alternative:
  - To evaluate alternatives, suggest that students begin by listing the criteria which must be met by any alternative. Then, they can judge potential alternatives in terms of the criteria.

- If students have difficulty selecting an alternative:
  - To select alternatives, suggest that students begin by listing the criteria which must be met by any alternative. Then, they can judge potential alternatives in terms of the criteria.

- If students have difficulty transferring knowledge/training to new situations:
  - Remind the students that everything they do makes use of information that they already know. Tell them that this process of using known information often happens subconsciously. When you identify an animal as a dog, you use already known information—you know what dogs look and act like so you can recognize a dog.
  - Tell the students that when they encounter a situation or a question they aren't familiar with, they should examine it carefully to identify what they already know that will help them solve the problem or answer the question. For practice, use examples such as the following:
  - A baby you are caring for starts crying. You don't know why, but you do want to make her stop. How do you know what to try? Begin by thinking carefully about what you know about why babies cry. (hungry, diaper needs changing, wants attention, sick) Identifying what you already know gives you ideas to try that might make the baby stop crying.
  - Remind the students that when trying to solve a problem or answer a question, they should always identify what they know by thinking about similar situations, problems, or questions they have faced. This will help them with find the answer.

- If students have difficulty developing an action plan:
  - Define an "action plan." An action plan assigns specific tasks to individuals or groups and states the date on which these tasks must be completed.

- State the purposes of action plans. Encourage students to write these points down for reference:
    - They set up logical steps for accomplishing objectives.
    - They show achievement milestones.
    - They assign ownership to individuals and empower them.
    - They provide a basis for cooperation and recognition.
    - They describe how resources will be distributed.
- Research and outline for students the steps in using any of the following "tools" for planning actions: flowcharts, PERT charts, and Gantt charts.

Job Acquisition/Development

- If students have difficulty mastering specific job task/procedure:
    - Discuss the importance of mastering specific job tasks or procedures. Explain that it is probably impossible to find a job where there isn't a task or procedure to be mastered. Remind them that future employers will be more likely to hire people who can already perform the tasks required.
    - Ask the students to share methods they have used to master specific job tasks or procedures. Discuss these methods with the class.
    - Emphasize the fact that practice makes a person proficient and proficiency makes a person confident.
    - Suggest they study each component of the procedure to determine which area is causing difficulty.
    - Review the entire procedure.
    - Team them with proficient students or professionals to practice the procedure.

Equine Management and Production

Instructor's Resource Package

Handouts

LAP Sheets

Transparency Masters

Written Tests

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LAP SHEET

THE EQUINE INDUSTRY

A1

Check the blank as you complete each step.

1. **Take** ___ the pretest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.

2. **Read** ___ the introduction, unit objective, and specific objectives.

3. **Do** ___ the focus assignments.

4. **Stop** ___ and have your instructor evaluate your work from the focus assignment. After your work has been evaluated, follow your instructor's recommendations.

5. **Study** ___ the Information Sheet, objectives 1-4.

Optional: View ___ one or more of the following videos: *The Horse & Society*, *On the Fifth Day*, *All In a Day's Ride*, *What Makes Him Run*, *The Story of American Quarter Horse Racing*, *An American Treasure*, *Image of Excellence*.

6. **Do** ___ Assignment Sheet 1.

7. **Stop** ___ and have your instructor evaluate your work from the Assignment Sheet. After your work has been evaluated, follow your instructor's recommendations.

Optional: Write ___ a report on a specific breed.

Optional: Give ___ a short oral presentation on a specific breed.

8. **Study** ___ the Information Sheet, objective 6.

9. **Do** ___ Assignment Sheet 2.

May be photocopied for student use.

10. **Stop** ___ and have your instructor evaluate your work from the Assignment Sheet. After your work has been evaluated, follow your instructor's recommendations.

11. **Take** ___ the posttest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.

May be photocopied for student use.

WRITTEN TEST

THE EQUINE INDUSTRY

A1

Name ______________________________ Score __________

OBJECTIVE 1

Match stages of evolutionary development of the horse to their descriptions. Write the correct letter in the blank.

A. Merychippus
B. Equine Hippus
C. Eohippus
D. Mesohippus
E. Eliocaballus
F. Equus Caballus
G. Meliohippus
H. Pliohippus

_____ 1. About the size of a donkey with one toe called a hoof; versatility and visibility greatly increased; 12 to 1 million years ago

_____ 2. Size, intelligence, and speed increased into our "modern day horse"; 0 to 1 million years ago.

_____ 3. Approximate size of a small pony; became plains dweller as the central toe enlarged and carried all the weight; 28 to 12 million years ago

_____ 4. 10"-12" high, swamp-roaming animal with even teeth, slender legs, and short neck; front foot had four toes and rear foot had three toes; 58 to 38 million years ago

_____ 5. About the size of a collie dog with conformation similar to a deer; teeth and jaws slightly larger; front and rear feet had three toes with the middle ones more pronounced; 38 to 28 million years ago

May be photocopied for student use.

OBJECTIVE 2

Match terms related to basic horse terminology to their definitions. Write the correct letter in the blank.

A. Breed
B. Colt
C. Cryptorchid
D. Ancestor
E. Foal
F. Gelding
G. Sensitive side
H. Sterile
I. Stallion
J. Quarter-foot
K. Yearling
L. Dam
M. Near side
N. Off side
O. Withers
P. Neck
Q. Weanling
R. Weaned foal
S. Mare
T. Filly
U. Crypeling
V. Hand
W. Sire
X. Equine

_____ 1. Left side of a horse

_____ 2. Female parent

_____ 3. Area between the mane and the back over the shoulders

_____ 4. Standard measurement of a horse; four inches

_____ 5. Horse that is one year of age

_____ 6. Male horse which has been castrated

_____ 7. Mature female horse

_____ 8. A weaned foal before becoming a yearling

_____ 9. Horse under one year of age

_____ 10. A stallion with one or both testicles retained in the abdomen

_____ 11. A young stallion

_____ 12. A young mare

_____ 13. Animals related by descent from common ancestors and visibly similar in most characteristics

_____ 14. Male parent

_____ 15. Mature male horse that has not been castrated

_____ 16. Right side of a horse

May be photocopied for student use.

OBJECTIVE 3

List five ways horses can be used. Write the five ways horses can be used in the blanks provided.

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________

OBJECTIVE 4

Identify the five common horse breeds in the state. Your instructor will show you five slides. Write the correct breed in the blanks provided.

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________

OBJECTIVE 5

Evaluated on Assignment Sheet 1.

May be photocopied for student use.

OBJECTIVE 6

Describe three job opportunities in the equine industry that interest you. Describe three job opportunities in the blanks provided.

1. ____
____
____
____

2. ____
____
____
____

3. ____
____
____
____

OBJECTIVE 7

Evaluated on Assignment Sheet 2.

May be photocopied for student use.

HANDOUT 1

HORSE BUSINESS IS BIG BUSINESS

Horses bring more than the sound of hoofbeats to Cityville, they bring money. Economists from the local university state that the equine industry brings millions of dollars into Cityville each year. Many local equine businesses, such as feed suppliers, trainers and stable owners, tack and equipment stores, and clothing stores benefit from the popularity of horses in this area. Other businesses not directly related to the equine industry also benefit from the popularity of horses in Cityville.

Each year the city hosts many horse events from major association shows to smaller sales and local shows. These events draw both competitors and spectators to the city where they spend money in local hotels and restaurants.

"The Chamber of Commerce and city leaders are very happy that Cityville is able to host many horse events," said Joe Johnson, who works for the Chamber of Commerce. He also stated the city is interested in drawing more equine events.

The horse business is not only big business in Cityville but in many other cities across the country. From racing to publications, horses have carved out a niche for many seeking a career relating to horses. "Many people are able to take their expertise in a certain field, combine it with their knowledge of horses, and turn this into a job in the equine industry," said Mary Mullins, founder of EquiSoft, Inc., a company that creates and sells software for horse owners and breeders.

"The equine industry is a business, and just as any other business, needs people who are good managers, marketing experts, sales personnel, advertising personnel, and office and clerical help," said Joel Hardy who is a career counselor at the local university.

When asked what advice Joel might give to someone considering a career in the equine industry he stated, "Look at all of the options, assess your strong points and weak points and explore different areas. Don't get set on one particular job because there are many jobs in the equine industry. Learn all you can by gaining education and experience."

The popularity of horses does not give any indication of dying out. Although as with many businesses, the equine industry has ups and downs, it is here to stay. As for now, many businesses that benefit from the industry are ringing up profits.

May be photocopied for student use.

BREED ASSOCIATIONS

LIGHT HORSES

Breed: American Paint Horse

Association: American Paint Horse Association
Box 961023
Fort Worth, TX 76161-0023

Place of Origin: United States

Color: Red roan, sorrel, chestnut, grullo, blue roan, gray, black, red dun, dun, palomino, buckskin, bay, and brown. Paint horses may range from almost a solid color with minimal white markings to almost a solid white.

Comments: The American Paint Horse Association accepts only horses whose bloodlines derive from registered American Paint Horses, American Quarter Horses, and Thoroughbreds.

Uses: Pleasure, stock, show, racing

Breed: American Saddlebred

Association: American Saddlebred Horse Association
4093 Iron Works Pike
Lexington, KY 40511

Place of Origin: United States, Kentucky

Color: Bay, brown, chestnut, gray, black, golden

Uses: Three- and five-gaited saddle horses, pleasure, stock, fine harness horses

Breed: Appaloosa

Association: Appaloosa Horse Club
Box 8403
Moscow, ID 83843-0903

Place of Origin: United States

Color: The coloring of the Appaloosa varies with combinations of colors and spots. Appaloosas are characterized by their white sclera, striped hooves, mottled skin and coat pattern.

Uses: Stock, pleasure, parade, race, hunters and jumpers

May be photocopied for student use.

Breed: Arabian

Association: Arabian Horse Registry of America
12000 Zuni Street
Westminster, CO 80234-2300

Place of Origin: Arabia

Color: Bay, black, chestnut, grey, roan

Comments: The Arabian head with its dished face is a distinguishing characteristic.

Uses: Saddle, show, stock, pleasure, endurance riding

Breed: Hackney

Association: American Hackney Horse Society
4059 Iron Works Pike, Bldg. A
Lexington, KY 40511

Place of Origin: England

Color: Chestnut, bay, brown, roan, black; white markings are common

Uses: Heavy harness or carriage horses; crossbred to produce hunters and jumpers

---

Breed: Morgan

Association: American Morgan Horse Association
Box 960
Shelburne, VT 05482-0960

Place of Origin: United States, Vermont

Color: Bay, brown, black and chestnut; white markings are uncommon

Comments: Has excellent endurance

Uses: Saddle, stock, harness

May be photocopied for student use.

Breed: Palomino

Association: Palomino Horse Breeders of America
15253 E. Skelly Drive
Tulsa, OK 74116-2637

Place of Origin: United States from Spanish descent

Color: Golden with a light colored mane and tail

Comments: Breed desired depends on the use of the horse.

Uses: Pleasure, stock, saddle, parade

Breed: Paso Fino

Association: Paso Fino Horse Association, Inc.
P.O. Box 600
Bowling Green, FL 33834

Place of Origin: Spanish descent

Color: All equine colors, with or without white markings

Comments: Distinguished by its natural four beat gait, flowing mane and tail, and smooth ride

Uses: Pleasure, show, parade, trail and endurance, stock

Breed: Pinto

Association: Pinto Horse Association of America
1900 Samuels Ave.
Fort Worth, TX 76102-1141

Color: Half dark color with white spots

Comments: The Pinto Registry will accept several breed types.

Uses: Pleasure, show, stock, saddle

May be photocopied for student use.

Breed: Quarter Horse

Association: American Quarter Horse Association
Box 200
Amarillo, TX 79168

Place of Origin: United States

Color: Sorrel, black, chestnut, brown, grullo, bay, red roan, blue roan, dun, red dun, palomino, gray, buckskin

Comments: Well-muscled and powerfully built, versatile

Uses: Pleasure, stock, racing, show, hunters and jumpers

Breed: Standardbred

Association: United States Trotting Association
750 Michigan Avenue
Columbus, OH 43215-1191

Place of Origin: United States

Color: Bay, brown, chestnut, black, gray, roan, dun

Comments: Breed was developed primarily for harness racing.

Uses: Harness racing, show

Breed: Tennessee Walking Horse

Association: Tennessee Walking Horse Breeders' and Exhibitors' Association
Box 286
Lewisburg, TN 37091-0286

Place of Origin: United States, Tennessee

Color: Sorrel, chestnut, black, roan, white, bay, brown, gray, golden

Comments: The running walk is a distinctive characteristic of the breed.

Uses: Pleasure, show

May be photocopied for student use.

Breed: Thoroughbred

Association: The Jockey Club
821 Corporate Drive
Lexington, KY 40503

Place of Origin: England

Color: Bay, dark bay or brown, chestnut, black, roan, and gray; white markings on face and legs are common

Comments: Long, well-muscled legs contribute to use in racing and sports.

Uses: Racing, stock, saddle, hunters and jumpers, polo mounts

PONIES

Breed: Pony of the Americas

Association: Pony of the Americas Club
5240 Elmwood Avenue
Indianapolis, IN 46203-5990

Place of Origin: Unites States, Iowa

Color: Similar to Appaloosa

Uses: Youth mount

Breed: Shetland Pony

Association: American Shetland Pony Club
Box 3415
Peoria, IL 61612-3415

Place of Origin: Shetland Isles

Color: All colors

Uses: Youth mount

May be photocopied for student use.

Breed: Welsh Pony

Association: Welsh Pony and Cob Society of America
Box 2977
Winchester, VA 22601

Place of Origin: Wales

Color: Black, gray, bay, roan, cream, chestnut

Uses: Youth mount, harness racing, hunting

Breed: Connemara Pony

Association: American Connemara Pony Society
2630 Hunting Ridge Road
Winchester, VA 22603

Place of Origin: Ireland

Color: Gray, black, bay, brown, dun, cream, roan, chestnut

Uses: Pleasure, fine harness, hunting and jumping

DRAFT HORSES

Breed: Belgian

Association: Belgian Draft Horse Corp. of America
Box 335
Wabash, IN 46992-0335

Place of Origin: Belgium

Color: Bay, chestnut, roan, brown, gray, black

Uses: Attractions, special events, work

Breed: Clydesdale

Association: Clydesdale Breeders of the U.S.A.
17378 Kelley Road
Pecatonica, IL 61063

Place of Origin: Scotland

Color: Bay, brown, black, gray, chestnut, roan

Uses: Attractions, special events, work

May be photocopied for student use.

Breed: Percheron

Association: Percheron Horse Assn. of America
Box 141
Fredericktown, OH 43019

Place of Origin: France

Color: Black, gray, bay, brown, chestnut, roan

Uses: Attractions, special events, work, crossbred with Thoroughbreds to produce hunters and jumpers

---

Breed: Suffolk

Association: American Suffolk Horse Association
4240 Goehring Road
Ledbetter, TX 78946

Place of Origin: England

Color: Chestnut

Uses: Attractions, special events, work

May be photocopied for student use.

ADDITIONAL ADDRESSES

American Quarter Pony Association
Box 30
New Sharon, IA 50207

American Andalusian Horse Association
6990 Manning Road
Economy, IN 47339

American Donkey and Mule Society
2901 N. Elm Street
Denton, TX 76201

American Hanoverian Society
4059 Iron Works Pike
Lexington, KY 40511

American Miniature Horse Association
2908 S.E. Loop 820
Fort Worth, TX 76140

American Warmblood Society
Route 5, Box 1219A
Phoenix, AZ 85043

American Shire Horse Association
2345 315 Court
Adel, IA 50003

American Mustang and Burro
Association
Box 7
Benton City, WA 99320-0007

Friesian Society
Box 7201
Ardsley-On-Hudson, NY 10503

Galiceno Horse Breeders Association
Box 219
Godley, TX 76044

Lipizzan Association of North America
Box 1388
Flagstaff, AZ 86002

National Association of Grade Horses
22408 Road 102
Woodland, CA 95776

Spanish-Barb Breeders Association
International
Box 641
Lyons, CO 80540

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LAP SHEET

SAFETY

A2

Check the blank as you complete each step.

1. **Take** ___ the pretest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.
2. **Read** ___ the introduction, unit objective, and specific objectives.
3. **Do** ___ the focus assignments.
4. **Stop** ___ and have your instructor evaluate your work from the focus assignment. After your work has been evaluated, follow your instructor's recommendations.
5. **Study** ___ the Information Sheet, objectives 1-6.
6. **Do** ___ Assignment Sheet 1.
7. **Stop** ___ and have your instructor evaluate your work from the Assignment Sheet. After your work has been evaluated, follow your instructor's recommendations.
8. **Study** ___ the Information Sheet, objectives 8-12.
9. **Ask** ___ your instructor to demonstrate the guidelines and procedures in the Job Sheet. Use the Job Sheet to follow along. Pay careful attention to any guidelines, cautions, and warnings.
10. **Practice** ___ the procedures demonstrated by your instructor. Use the Job Sheet as a guide. Notify your instructor when you are ready to perform the procedures for evaluation.
11. **Stop** ___ and have your instructor evaluate your work from the Job Sheet. After your work has been evaluated, follow your instructor's recommendations.
12. **Study** ___ the Information Sheet, objectives 14-17 .

May be photocopied for student use.

13. **Do** ___ Assignment Sheet 2.

14. **Stop** ___ and have your instructor evaluate your work from the Assignment Sheet. After your work has been evaluated, follow your instructor's recommendations.

15. **Study** ___ the Information Sheet, objective 19.

16. **Do** ___ Assignment Sheet 3.

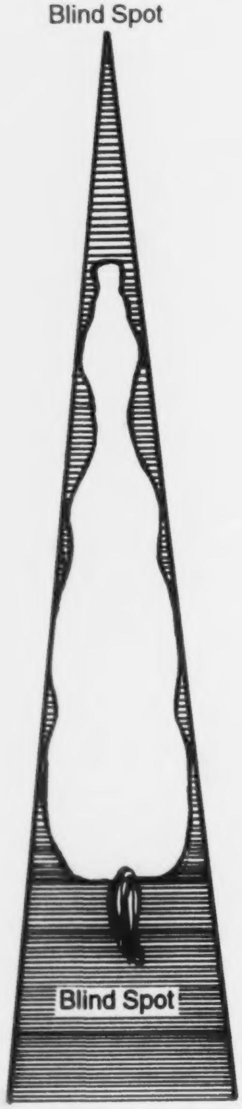
17. **Stop** ___ and have your instructor evaluate your work from the Assignment Sheet. After your work has been evaluated, follow your instructor's recommendations.

18. **Take** ___ the posttest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.

May be photocopied for student use.

TM

BLIND SPOT


Blind Spot
Blind Spot

353

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SAFETY

A2

Name ______________________ Score __________

OBJECTIVE 1

Describe the senses of the horse. Write a short description of each sense.

1. vision ______________________

2. hearing ______________________

3. smell ______________________

4. taste ______________________

5. touch ______________________

May be photocopied for student use.

OBJECTIVE 2

Describe general temperament types of horses. Write a short description of each temperament type.

1. good-natured placid ____________________

2. good-natured interested ____________________

3. nervous ____________________

4. stubborn ____________________

5. spoiled ____________________

6. bad-tempered ____________________

May be photocopied for student use.

OBJECTIVE 3

Match horse behaviors to their descriptions. Write the letter of the answer in the blank.

A. Agonistic
B. Allelomimetic
C. Contactual
D. Nurturing
E. Eliminative
F. Epimeletic
G. Et-epimeletic
H. Sensory
I. Investigative
J. Breeding
K. Sexual
L. Sleeping and waking
M. Hierarchy
N. Play
O. Dominance
P. Vices
Q. Ingestive
R. Learning
S. Bonding
T. Grooming

_____ 1. Behavior generally considered the result of seeking affection or protection

_____ 2. Mimicry; contagious or undesired behavior

_____ 3. Includes all actions that are a result of or associated with conflict or fighting

_____ 4. All acts associated with the mating process

_____ 5. Characterized by "pecking orders" which range from most dominant down to most submissive

_____ 6. Elimination of waste by defecation or urination

_____ 7. Acts which are necessary for the horse to function by getting proper rest

_____ 8. Taking of food or water into the digestive tract

_____ 9. Sensory inspection of the environment which generally involves one or all of the horse's senses

_____ 10. Behavior which the horse enjoys

_____ 11. Giving of care and attention between horses

_____ 12. Exhibited by calling or movement by young and adult horses when separated from each other

_____ 13. Behavior associated with maintaining the horse's hair coat

_____ 14. Behavior associated with learning certain tasks

May be photocopied for student use.

OBJECTIVE 4

Discuss the body language of horses. Write a short description of each type of body language.

1. interested ______________________________
2. playful/happy ______________________________
3. eager ______________________________
4. proud ______________________________
5. frightened ______________________________
6. angry ______________________________
7. bored ______________________________
8. bereaved ______________________________
9. horse in pain ______________________________

May be photocopied for student use.

OBJECTIVE 5

List the types of horse vices and give three examples of each. List three vices and three examples of each in the blanks below.

1. ____

____

2. ____

____

3. ____

____

OBJECTIVE 6

List the reasons for vices. List the four reasons in the blanks below.

1. ____
2. ____
3. ____
4. ____

OBJECTIVE 7

Evaluated on Assignment Sheet 1.

May be photocopied for student use.

OBJECTIVE 8

Describe appropriate dress for working around horses. Write a short description of the appropriate dress.

OBJECTIVE 9

Distinguish between safe and unsafe practices when approaching a horse. Write an "S" in front of safe practices and a "U" in front of unsafe practices.

_____ 1. Approach the horse head on so that the horse can see you.

_____ 2. Avoid any quick or unexpected movements.

_____ 3. Speak to the horse as you approach.

_____ 4. Observe reactions of the horse for indications of its intentions.

_____ 5. Walk up to horse quickly with authority.

_____ 6. Rub the horse's nose and let the horse sniff you.

_____ 7. Approach the horse by moving to its shoulder.

_____ 8. Do NOT speak to the horse since this is a distraction.

_____ 9. Never surprise a horse from behind.

_____ 10. Place your hand on the horse's shoulder and rub gently to reassure the horse against danger.

_____ 11. Do NOT touch the horse's nose.

May be photocopied for student use.

_____ 12. Do NOT let the horse see the halter.

_____ 13. Move toward the horse slowly and quietly, but positively.

_____ 14. Concentrate only on your actions, not on the horse's actions.

_____ 15. Have the halter in the correct position if attempting to catch the horse.

OBJECTIVE 10

Distinguish between safe and unsafe practices when handling the horse. Place an "S" in front of safe practices and a "U" in front of unsafe practices.

_____ 1. Realize that different horses will have different temperaments and reactions.

_____ 2. Handle the horse with confidence and remain calm.

_____ 3. Treat all horses in the same manner.

_____ 4. Respect horse for its strength and ability.

_____ 5. Never sit or kneel when handling a horse.

_____ 6. Always let the horse know what you are doing.

_____ 7. Do NOT take chances of being stepped on, kicked, or bitten.

_____ 8. Be considerate.

_____ 9. Hitting the horse is a good way to get their attention.

_____ 10. Remember that you can force the horse to cooperate.

_____ 11. Pay attention to the body language of the horse.

_____ 12. A very loud tone of voice will get the horse to pay attention and cooperate.

_____ 13. Find the most comfortable position possible when handling the horse.

_____ 14. Avoid loud noises or quick, unexpected movements.

_____ 15. Perform all procedures as quickly as possible.

May be photocopied for student use.

OBJECTIVE 11 **Describe safe practices when leading the horse.** Describe safe practices when leading the horse in the blanks provided.

____

____

____

____

____

____

OBJECTIVE 12 **Describe safe practices when tying the horse.** Write a short description of safe practices in the blanks below.

____

____

____

____

____

____

OBJECTIVE 13 **Evaluated on the Job Sheet.**

OBJECTIVE 14 **Explain safety procedures in the horse barn or facility.** Write a short explanation of the safety procedures.

____

____

____

____

May be photocopied for student use.

OBJECTIVE 15

Explain safety procedures in the corral, paddock and pasture. Write a short explanation of the safety procedures.

____

____

____

____

OBJECTIVE 16

List types of restraints. List the five types of restraints in the blanks below.

1. ____
2. ____
3. ____
4. ____
5. ____

OBJECTIVE 17

Describe safety considerations when restraining horses. Write a short description of safety considerations.

____

____

____

____

____

____

____

OBJECTIVE 18

Evaluated on Assignment Sheet 2.

May be photocopied for student use.

OBJECTIVE 19

Describe legal and ethical obligations for reporting mistreatment of horses. Write a short description of the legal and ethical obligations.

____

____

____

____

____

____

____

____

OBJECTIVE 20

Evaluated on Assignment Sheet 3.

May be photocopied for student use.

YOUNG BOY SERIOUSLY INJURED IN HORSE MISHAP

A 13-year-old Fairtown boy was seriously injured Saturday at a local playday. Jonathan Harris was attending the playday with his horse when the accident occurred. Jonathan had just finished his last event and dismounted, leaving his horse unattended for a brief moment. Something frightened the horse and the horse started to flee, heading off between parked cars. Onlookers stated that Jonathan was afraid the horse might get hit because there was a highway close by. Jonathan ran after the horse and when he caught up to the horse grabbed its tail. The frightened horse kicked, not aware that it was Jonathan. The horse kicked Jonathan in the head, causing a concussion.

The young boy was lifeflighted to the emergency room at nearby Cityview. Doctors stated his condition as critical. He remains in the hospital and doctors are hopeful that his condition will improve.

A friend of Jonathan's stated, "The horse had never hurt anyone, he was as gentle as any horse I've ever seen." The accident shocked many of the onlookers at the playday, especially since the horse had performed flawlessly for the young boy.

May be photocopied for student use.

LAP SHEET

HANDLING, GROOMING AND GENERAL CARE

A3

Check the blank as you complete each step.

1. **Take** ___ the pretest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.

2. **Read** ___ the introduction, unit objective, and specific objectives.

3. **Do** ___ the focus assignments.

4. **Stop** ___ and have your instructor evaluate your work from the focus assignment. After your work has been evaluated, follow your instructor's recommendations.

5. **Ask** ___ your instructor to display a halter and identify the parts.

6. **Study** ___ the Information Sheet, objective 2.

7. **Ask** ___ your instructor to demonstrate the guidelines and procedures in Job Sheet 1. Use the Job Sheet to follow along. Pay careful attention to any guidelines, cautions, and warnings.

8. **Practice** ___ the procedures demonstrated by your instructor. Use the Job Sheet as a guide. Notify your instructor when you are ready to perform the procedures for evaluation.

9. **Stop** ___ and have your instructor evaluate your work from the Job Sheet. After your work has been evaluated, follow your instructor's recommendations.

10. **Study** ___ the Information Sheet, objectives 4-5.

11. **Ask** ___ your instructor to display the grooming equipment/aids/products used in Objective 6.

12. **Study** ___ the Information Sheet, objectives 7-10.

May be photocopied for student use.

13. Ask ___ your instructor to demonstrate the guidelines and procedures in Job Sheet 2. Use the Job Sheet to follow along. Pay careful attention to any guidelines, cautions, and warnings.

14. Practice ___ the procedures demonstrated by your instructor. Use the Job Sheet as a guide. Notify your instructor when you are ready to perform the procedures for evaluation.

15. Stop ___ and have your instructor evaluate your work from the Job Sheet. After your work has been evaluated, follow your instructor's recommendations.

16. Ask ___ your instructor to demonstrate the guidelines and procedures in Job Sheet 3. Use the Job Sheet to follow along. Pay careful attention to any guidelines, cautions, and warnings.

17. Practice ___ the procedures demonstrated by your instructor. Use the Job Sheet as a guide. Notify your instructor when you are ready to perform the procedures for evaluation.

18. Stop ___ and have your instructor evaluate your work from the Job Sheet. After your work has been evaluated, follow your instructor's recommendations.

19. Take ___ the posttest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.

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WRITTEN TEST

HANDLING, GROOMING AND GENERAL CARE

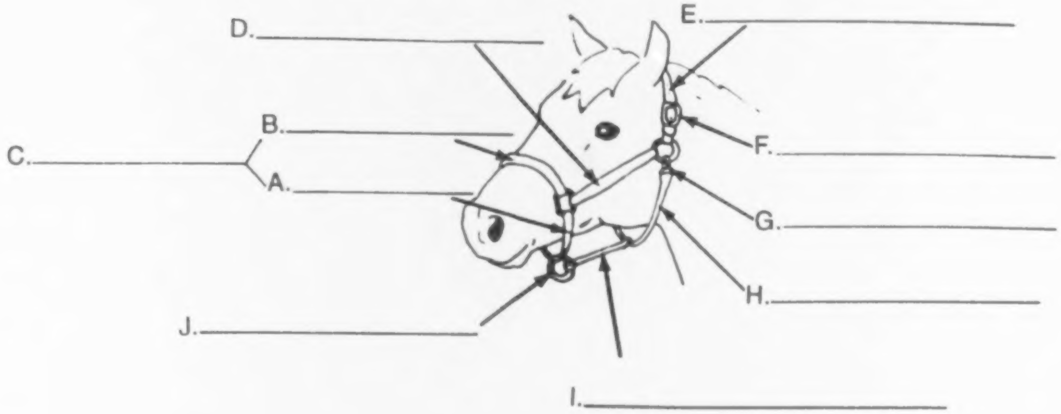
A3

Name ______________________________ Score __________

OBJECTIVE 1

Identify the parts of a halter. Write the names of the parts of a halter in the blanks provided.

Cheekpiece
Noseband
Nosepiece
Chinpiece
Tie Ring
Crownpiece
Buckle
Snap
Throatlatch
Connecting Strap



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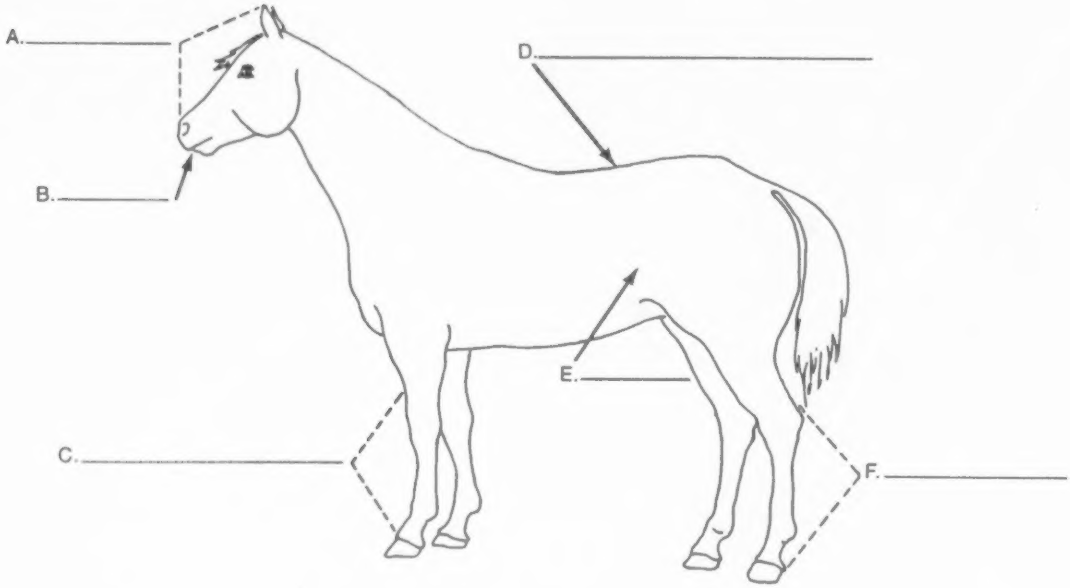
OBJECTIVE 2	**Describe the proper fit of the halter.** Write a short description of the proper fit of the halter.
OBJECTIVE 3	**Evaluated on Job Sheet 1.**
OBJECTIVE 4	**Label the sensitive areas of the horse.** Write the sensitive areas in the blanks provided.



May be photocopied for student use.

OBJECTIVE 5

List reasons for grooming the horse. List reasons for grooming the horse in the blanks provided.

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________
6. ______________________________

OBJECTIVE 6

Identify grooming equipment/aids/products. Your instructor will show you examples of items of grooming equipment/ aids/products. Write the name of each piece of grooming equipment/ aid/product in the blank provided.

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________
6. ______________________________
7. ______________________________
8. ______________________________
9. ______________________________
10. ______________________________
11. ______________________________
12. ______________________________

May be photocopied for student use.

OBJECTIVE 7

Match grooming equipment to its uses. Write the letter of the answer in the blank.

A. body brush
B. nippers
C. cloth or rag
D. shampoo
E. sweat comb
F. shears
G. dandy brush
H. fly sprays
I. sweat scraper
J. mane and tail comb
K. coat conditioners
L. rubber curry comb
M. round brush
N. hoof care products
O. animal clippers
P. scissors
Q. steel curry comb
R. hoof pick/brush

_____ 1. Cleans horse's hoofs

_____ 2. Removes dried sweat and deep-seated dirt

_____ 3. Removes sweat and water

_____ 4. Soft brush which removes surface dirt and dust

_____ 5. Condition coat and add shine

_____ 6. Moisten and polish hoof

_____ 7. Removes mud and loosens matted hair and dirt

_____ 8. Trim hair from ear, face, and jaw

_____ 9. Increase shine by removing small particles missed by brushes

_____ 10. Combs mane and tail

_____ 11. Prevent flies

_____ 12. Cleans horse's coat

May be photocopied for student use.

OBJECTIVE 8

Select from a list safety factors to consider when physically approaching the horse during grooming. Place an "X" in front of correct safety factors.

_____ 1. Always speak to the horse when approaching.

_____ 2. Make physical contact with a horse by first placing your hand on the horse's rear.

_____ 3. Let the horse see that you have grooming equipment.

_____ 4. If carrying a halter, conceal it behind your back.

_____ 5. Make physical contact with a horse by first placing your hand on its shoulder and neck.

_____ 6. If haltering the horse, follow the proper procedure for haltering.

OBJECTIVE 9

Select from a list safety factors to consider when grooming. Place an "X" in front of correct safety factors.

_____ 1. Always let the horse know what you intend to do.

_____ 2. Avoid abrupt movements or loud noises.

_____ 3. Do NOT talk to the horse so that you can concentrate on the grooming.

_____ 4. Leave grooming tools on the ground where they are easily accessible.

_____ 5. Always be aware of your position and keep your balance.

_____ 6. Always walk under the lead rope, never around the back of the horse.

_____ 7. Pay attention to the body language of the horse.

_____ 8. NEVER sit or kneel when grooming.

_____ 9. Do NOT stand directly behind the horse when working with its tail; stand off to one side.

_____ 10. Position yourself directly in front of the horse when grooming the chest area.

May be photocopied for student use.

_____ 11. Talk to the horse in a soft voice to keep the horse calm.

_____ 12. Do NOT leave grooming tools on the ground.

_____ 13. Do NOT groom a horse who has just been worked.

_____ 14. Do NOT position yourself directly in front of the horse.

_____ 15. Do NOT walk under the lead rope; always walk around the horse.

OBJECTIVE 10

List the minimum daily care requirements for horses. Write the minimum daily care requirements in the blanks provided.

1. ____

____

____

2. ____

____

____

3. ____

____

____

4. ____

____

____

5. ____

____

____

May be photocopied for student use.

6.

7.

OBJECTIVE 11 **Evaluated on Job Sheet 2.**

OBJECTIVE 12 **Evaluated on Job Sheet 3.**

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EVERY HORSE

Jack is a groom at a local race track. He is responsible for feeding and grooming race horses. His day begins at 6:00 a.m. when he feeds the horses. Later in the morning he must get the horses that are going to race that day groomed and ready for the track. The horses that are not going to race still must be attended to and checked for any signs of injury or illness. The stalls must be mucked twice a day, a job that Jack is not particularly fond of, but he realizes the importance of sanitary conditions.

Mary owns two quarter horse mares and keeps them in a pasture near her house. Mary rides the horses two to three times a week. Every day Mary feeds and checks on the horses. She often grooms the horses when she checks on them. If she is in a hurry, she might not groom the horses but she always observes the horses for any signs of injury or illness.

Sandy shows horses and has several of her own and also several horses she trains and shows for other individuals. Sandy must be certain that the horses are ready for the shows. When the weather turns colder, Sandy must blanket the horses that are going to be shown. Sandy must feed the horses two to three times a day since they are kept in a stall. She must also clean the stalls daily. Sometimes she will turn the horses out in a small pasture. When Sandy gets the horses ready for a show, she must make certain they look their best.

Bill works for a breeding farm that has several stallions available for stud services. Occasionally the breeding farm will advertise the stallions in association magazines or at horse shows. The advertisements include a photograph of the stallion. When the photographer comes to take the photograph, Bill must have the stallion groomed, clipped, and ready for the photographer.

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LAP
SHEET

HANDLING THE YOUNG, UNBROKEN HORSE

A4

Check the blank as you complete each step.

1. Take ___ the pretest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.
2. Read ___ the introduction, unit objective, and specific objectives.
3. Do ___ the focus assignments.
4. Stop ___ and have your instructor evaluate your work from the Focus Assignment. After your work has been evaluated, follow your instructor's recommendations.
5. Study ___ the Information Sheet, objectives 1-5.
6. Ask ___ your instructor to demonstrate the guidelines and procedures in Job Sheet 1. Use the Job Sheet to follow along. Pay careful attention to any guidelines, cautions, and warnings.
7. Practice ___ the procedures demonstrated by your instructor. Use the Job Sheet as a guide. Notify your instructor when you are ready to perform the procedures for evaluation.
8. Stop ___ and have your instructor evaluate your work from the Job Sheet. After your work has been evaluated, follow your instructor's recommendations.
9. Ask ___ your instructor to demonstrate the guidelines and procedures in Job Sheet 2. Use the Job Sheet to follow along. Pay careful attention to any guidelines, cautions, and warnings.
10. Practice ___ the procedures demonstrated by your instructor. Use the Job Sheet as a guide. Notify your instructor when you are ready to perform the procedures for evaluation.
11. Stop ___ and have your instructor evaluate your work from the Job Sheet. After your work has been evaluated, follow your instructor's recommendations.

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12. **Ask** ___ your instructor to demonstrate the guidelines and procedures in Job Sheet 3. Use the Job Sheet to follow along. Pay careful attention to any guidelines, cautions, and warnings.

13. **Practice** ___ the procedures demonstrated by your instructor. Use the Job Sheet as a guide. Notify your instructor when you are ready to perform the procedures for evaluation.

14. **Stop** ___ and have your instructor evaluate your work from the Job Sheet. After your work has been evaluated, follow your instructor's recommendations.

15. **Take** ___ the posttest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.

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WRITTEN TEST

HANDLING THE YOUNG, UNBROKEN HORSE

A4

Name ______________________ Score ________

OBJECTIVE 1

Match the stages of learning in a horse's training to the correct descriptions. Write the correct letter in the blank.

A. Specialized training
B. Learn by error
C. Breaking to ride
D. Re-education
E. Ground training
F. Elementary training
G. Training for basics
H. Early training
I. Imprint training
J. Progressive training

____ 1. To correct training already completed or perfect the work of a horse already well-trained; tune-up

____ 2. Training of the young horse rom birth until being ridden

____ 3. Teaching the horse collection, correct head carriage, leads, pivots, and backing up

____ 4. Teaching the horse to accept a rider and respond to basic artificial and natural handling aids, such as the sound and touch of the rider, and accepting a bit

____ 5. Developing the horse's ability for certain tasks such as cutting, roping, racing, jumping, or dressage

____ 6. The training procedures up to the point of getting on the horse's back

May be photocopied for student use.

OBJECTIVE 2

List factors to consider in training the young horse. List the factors to consider in the blanks provided.

1. ______________________________

2. ______________________________

3. ______________________________

4. ______________________________

OBJECTIVE 3

Select from a list factors to consider when physically approaching the young horse. Place an "X" in front of the correct answers.

____ 1. Speak assertively and in a loud voice.

____ 2. Place your right arm around the horse's neck.

____ 3. Place your hands on the horse's nose first.

____ 4. Confine the horse in a corner of a small area with the horse facing you.

____ 5. Speak in a soft voice.

____ 6. Work quickly.

____ 7. Place your right hand on the horse's shoulder first.

____ 8. Slip the halter on very slowly.

____ 9. Approach the young horse where it can not see you.

____ 10. Work slowly and deliberately but with confidence.

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OBJECTIVE 4

Discuss the uses of voice aids with young horses. Discuss the use of voice aids in the blanks provided.

OBJECTIVE 5

Describe the use of restraint in handling the young, unbroken horse. Describe the use of restraint in handling the young, unbroken horse in the blanks provided.

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OBJECTIVE 6	**Evaluated on Job Sheet 1.**
OBJECTIVE 7	**Evaluated on Job Sheet 2.**
OBJECTIVE 8	**Evaluated on Job Sheet 3.**

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IT TAKES TIME

Jill Hillman had been around horses since she was a young girl. She had always wanted to work with horses. Through hard work and years of experience, Jill is now regarded as one of the best trainers around. She works with both English and Western riding horses. In addition to basic training, Jill also trains in specialized events such as cutting and reining. While the horses make it look flawless in the show ring, Jill knows the hours and patience it took to get there.

Jill prefers to start the horses at a young age. She states, "Halter breaking a foal at one month is much easier than halter breaking it at one year." She says that while halter breaking is easier if they are young, you must also have patience and work in short time periods since the foals have a short attention span.

"You must gain the foal's trust and develop a working relationship with the foal," says Jill. Foals that are mistreated or handled harshly early in life usually have undesirable characteristics that carry through to maturity. You must let the foal know you are in control, while maintaining a positive relationship with the foal," states Jill.

Although Jill prefers to halter break when the foal is younger, she realizes that this is not possible in some cases. In her seminars, she stresses that trust and patience are important in training at any stage. She also stresses consistency. "Never give a horse mixed messages, the horse will become confused and then frustrated with the training," states Jill.

"Any type of training whether it be halter breaking, teaching to longe, or dressage takes time. It is not something that is done quickly. It also takes knowledge," states Jill.

Jill is a strong believer in education. Even with her many years of experience, she keeps up on her field by reading articles and books and by being responsive to ideas of other trainers. She believes that no matter what type of profession you have in the equine industry, continuing education is vital to your success. With several AQHA world champions to her credit, it is hard to argue with Jill.

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LAP
SHEET

HORSE HEALTH AND DISEASE PREVENTION

B1

Check the blank as you complete each step.

1. Take ___ the pretest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.

2. Read ___ the introduction, unit objective, and specific objectives.

3. Do ___ the focus assignments.

4. Stop ___ and have your instructor evaluate your work from the focus assignment. After your work has been evaluated, follow your instructor's recommendations.

5. Study ___ the Information Sheet, objectives 1-18.

6. Ask ___ your instructor to demonstrate the guidelines and procedures in the Job Sheet. Use the Job Sheet to follow along. Pay careful attention to any guidelines, cautions, and warnings.

7. Practice ___ the procedures demonstrated by your instructor. Use the Job Sheet as a guide. Notify your instructor when you are ready to perform the procedures for evaluation.

8. Stop ___ and have your instructor evaluate your work from the Job Sheet. After your work has been evaluated, follow your instructor's recommendations.

9. Study ___ the Information Sheet, objectives 20-26.

10. Do ___ Assignment Sheet 1.

11. Stop ___ and have your instructor evaluate your work from the Assignment Sheet. After your work has been evaluated, follow your instructor's recommendations.

12. Take ___ the posttest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.

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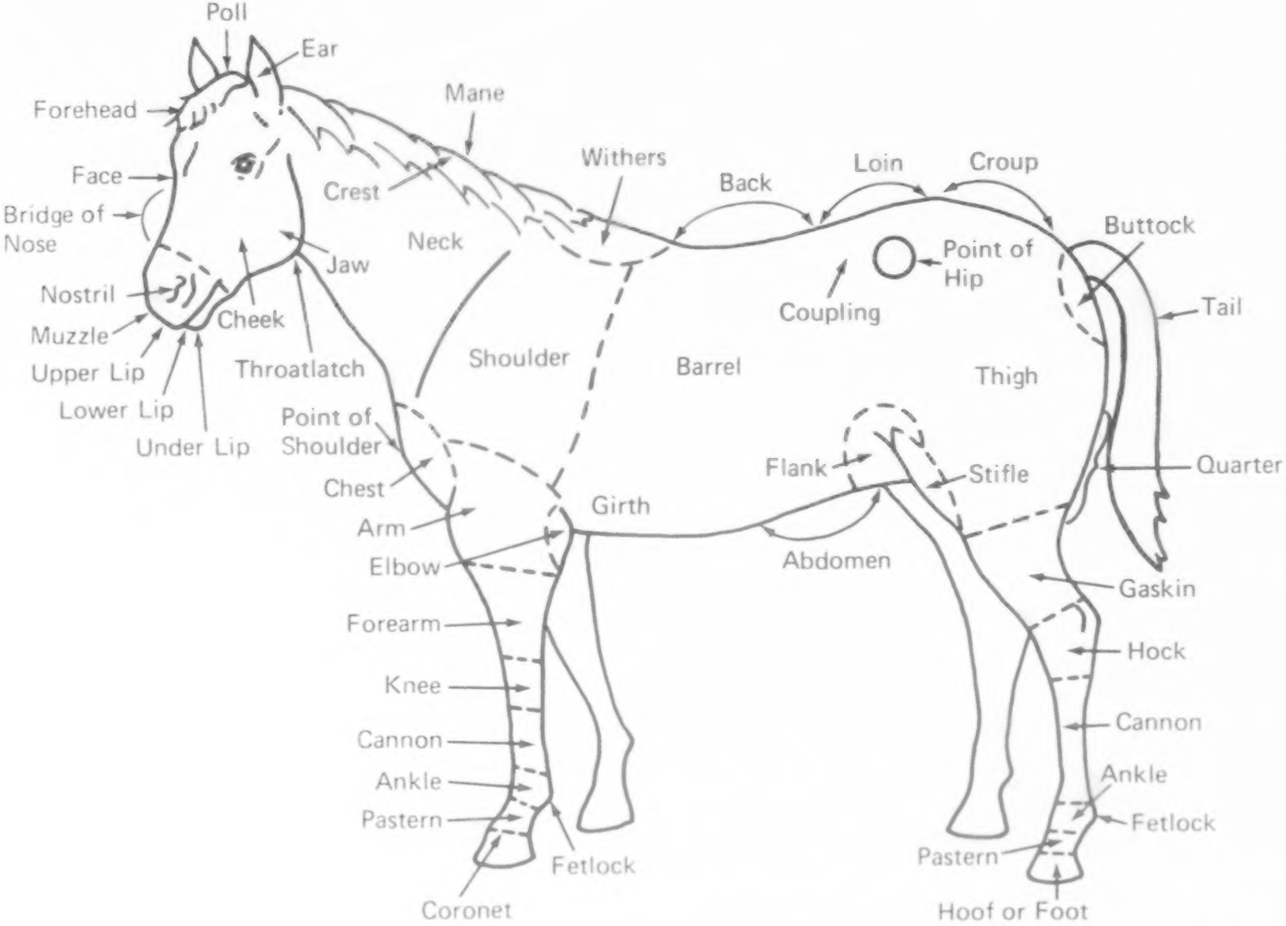
PARTS OF THE HORSE


Poll
Ear
Forehead
Mane
Face
Crest
Withers
Back
Loin
Croup
Bridge of Nose
Neck
Jaw
Buttock
Point of Hip
Nostril
Cheek
Coupling
Tail
Muzzle
Upper Lip
Throatlatch
Shoulder
Barrel
Thigh
Lower Lip
Under Lip
Point of Shoulder
Flank
Stifle
Quarter
Chest
Girth
Arm
Elbow
Abdomen
Gaskin
Forearm
Hock
Knee
Cannon
Cannon
Ankle
Ankle
Pastern
Fetlock
Fetlock
Pastern
Coronet
Hoof or Foot

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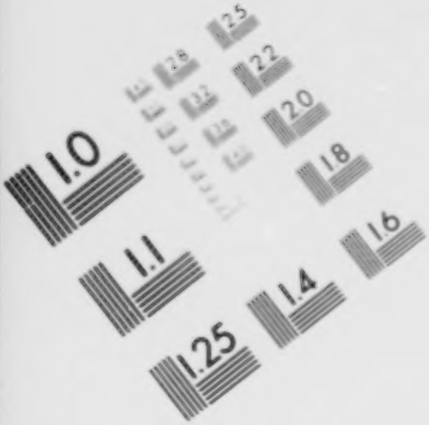
INSTRUCTOR'S RESOURCE PACKAGE - Equine Management and Production
TRANSPARENCY MASTER 1 - CIMC - B1 - 1

TM 1



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Association for Information and Image Management

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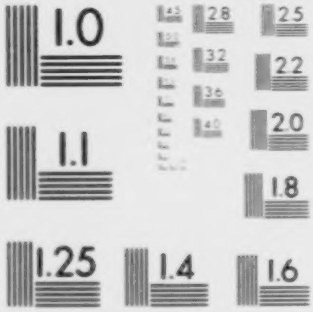

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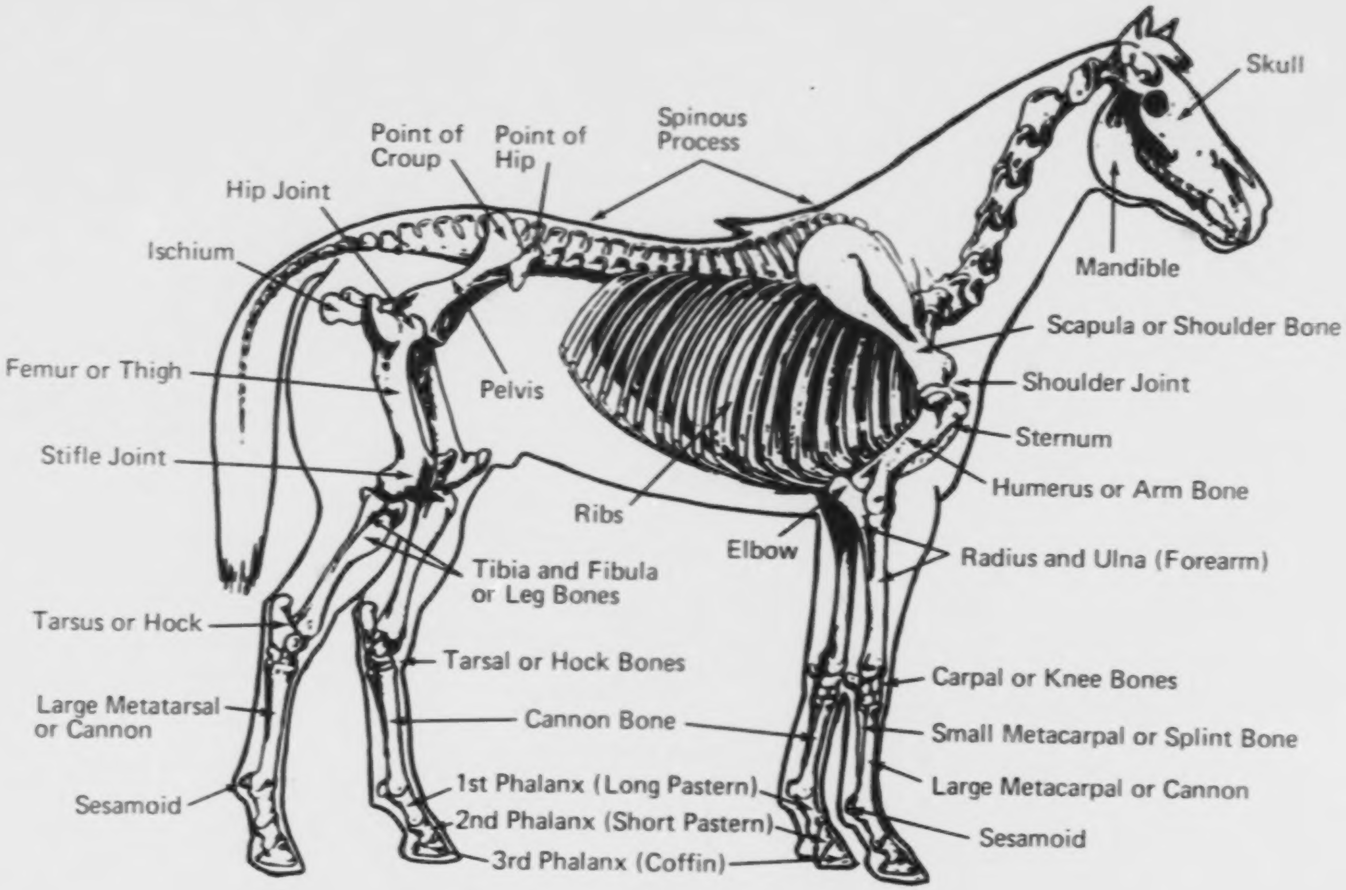
SKELETAL SYSTEM


Skull
Point of Croup
Point of Hip
Spinous Process
Hip Joint
Ischium
Mandible
Scapula or Shoulder Bone
Femur or Thigh
Pelvis
Shoulder Joint
Sternum
Stifle Joint
Humerus or Arm Bone
Ribs
Elbow
Radius and Ulna (Forearm)
Tibia and Fibula or Leg Bones
Tarsus or Hock
Tarsal or Hock Bones
Carpal or Knee Bones
Large Metatarsal or Cannon
Cannon Bone
Small Metacarpal or Splint Bone
Large Metacarpal or Cannon
1st Phalanx (Long Pastern)
Sesamoid
2nd Phalanx (Short Pastern)
Sesamoid
3rd Phalanx (Coffin)

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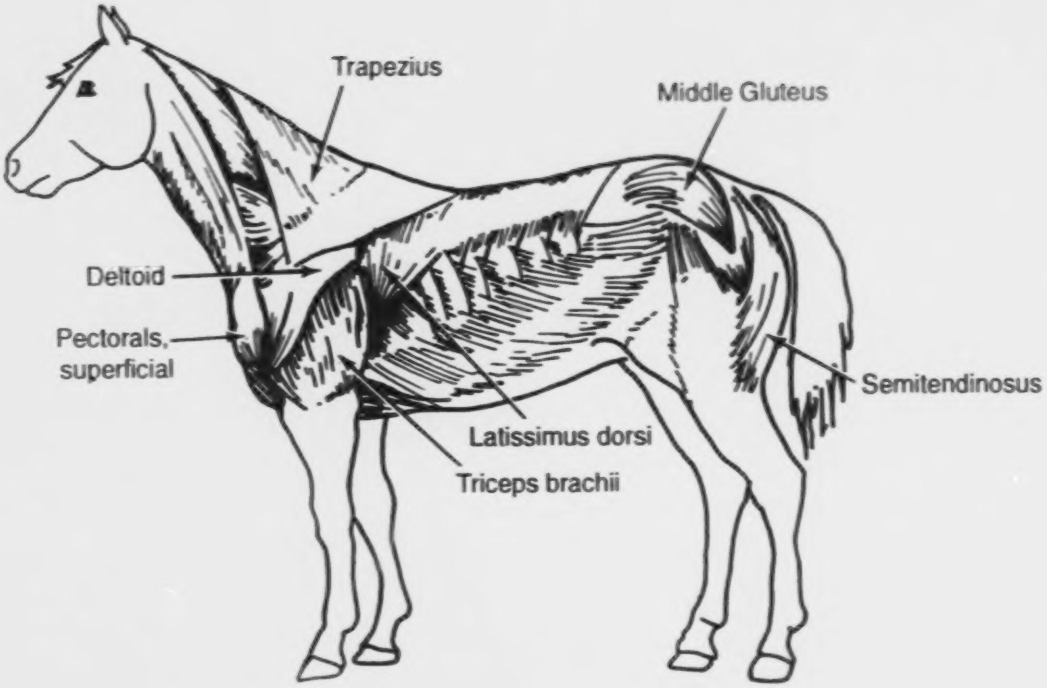
MUSCULAR SYSTEM


Trapezius
Middle Gluteus
Deltoid
Pectorals, superficial
Semitendinosus
Latissimus dorsi
Triceps brachii

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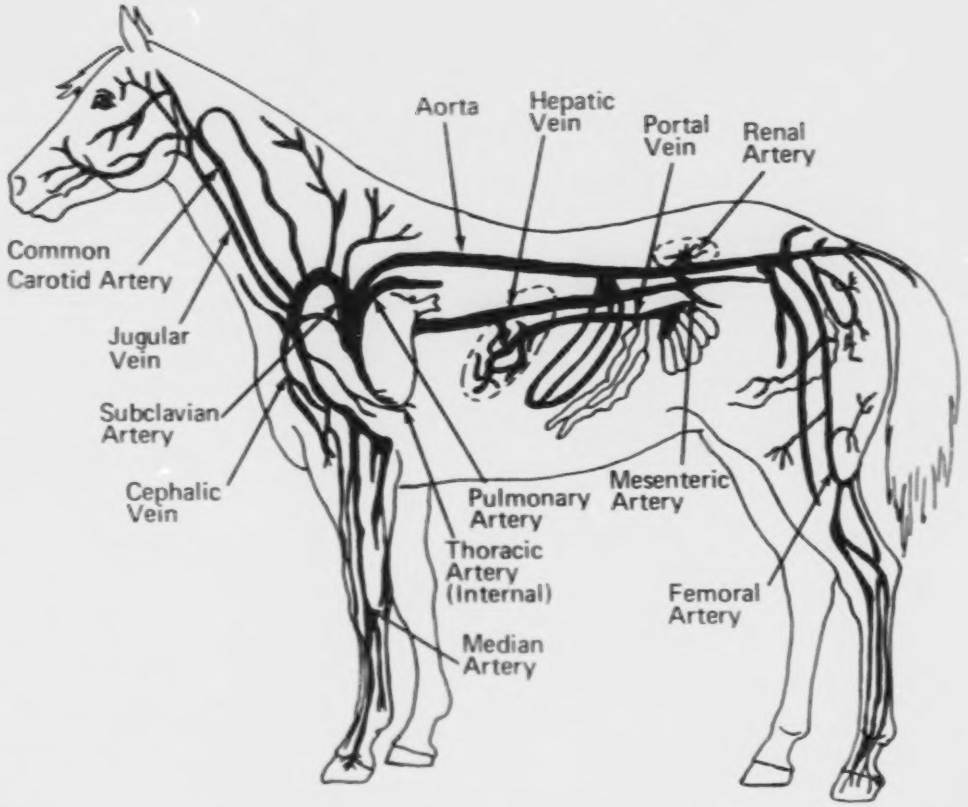
CIRCULATORY SYSTEM


Aorta
Hepatic Vein
Portal Vein
Renal Artery
Common Carotid Artery
Jugular Vein
Subclavian Artery
Cephalic Vein
Pulmonary Artery
Mesenteric Artery
Thoracic Artery (Internal)
Femoral Artery
Median Artery

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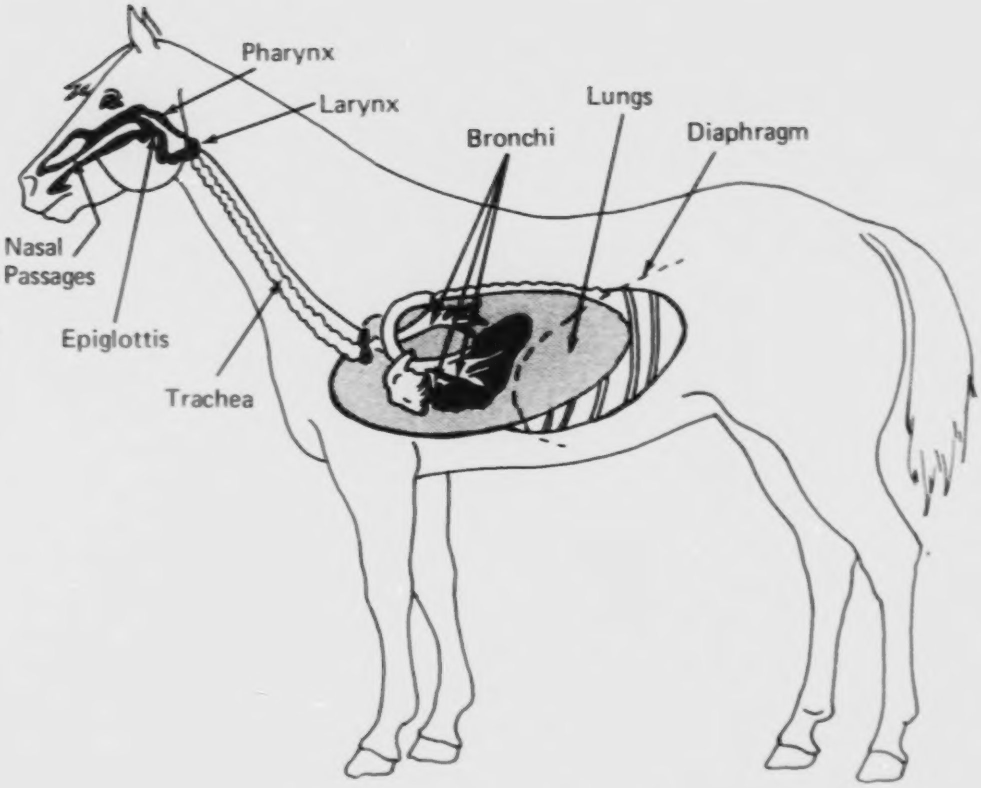
RESPIRATORY SYSTEM


Pharynx
Larynx
Lungs
Bronchi
Diaphragm
Nasal Passages
Epiglottis
Trachea

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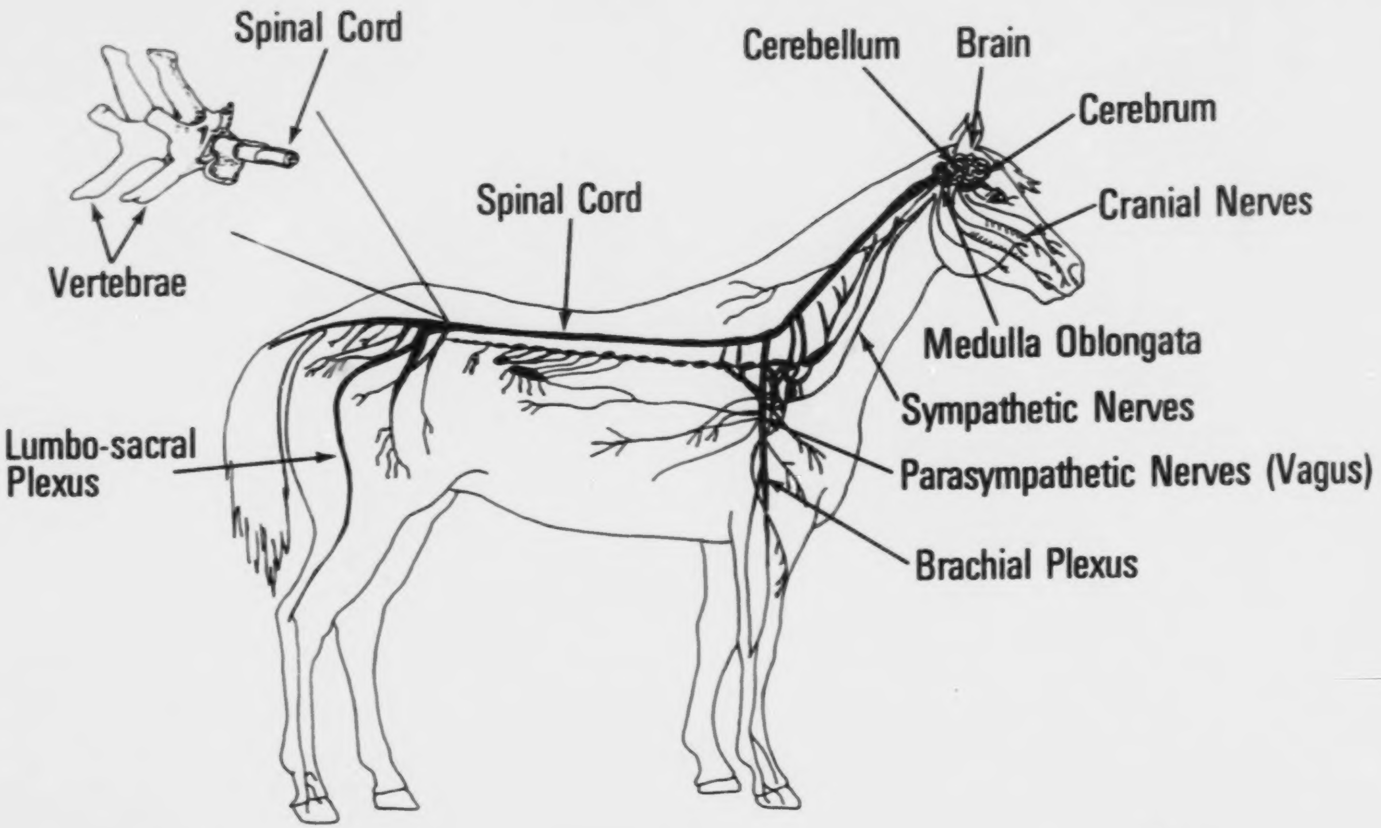
NERVOUS SYSTEM


Spinal Cord
Vertebrae
Spinal Cord
Cerebellum
Brain
Cerebrum
Cranial Nerves
Medulla Oblongata
Sympathetic Nerves
Parasympathetic Nerves (Vagus)
Brachial Plexus
Lumbo-sacral Plexus

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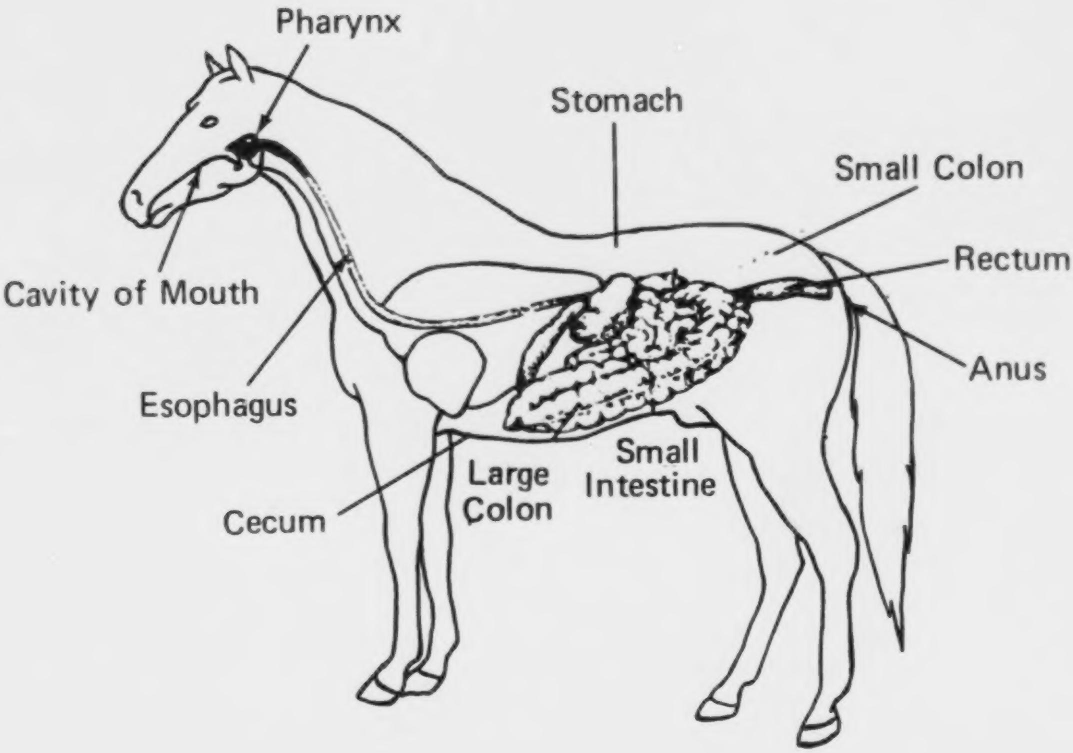
DIGESTIVE SYSTEM


Pharynx
Stomach
Small Colon
Rectum
Cavity of Mouth
Anus
Esophagus
Small Intestine
Large Colon
Cecum

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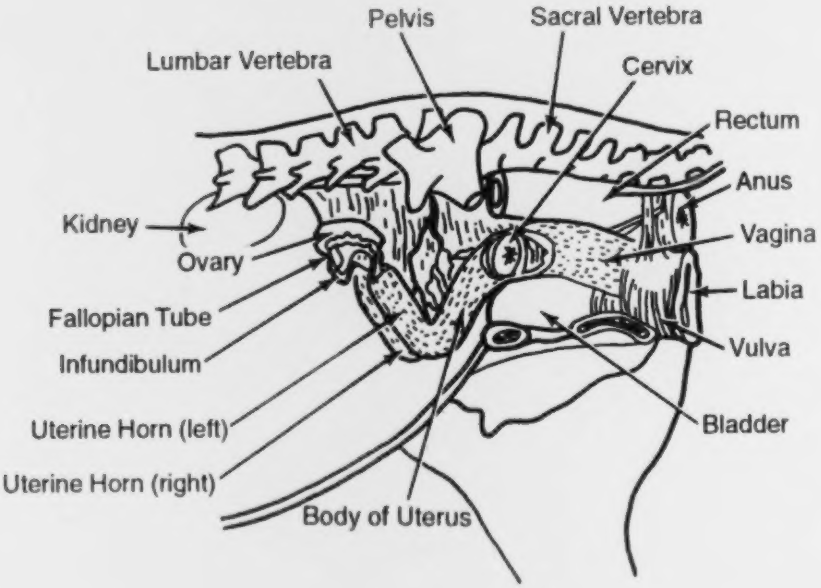
MARE REPRODUCTIVE SYSTEM


Pelvis
Sacral Vertebra
Lumbar Vertebra
Cervix
Rectum
Anus
Kidney
Vagina
Ovary
Labia
Fallopian Tube
Infundibulum
Vulva
Uterine Horn (left)
Bladder
Uterine Horn (right)
Body of Uterus

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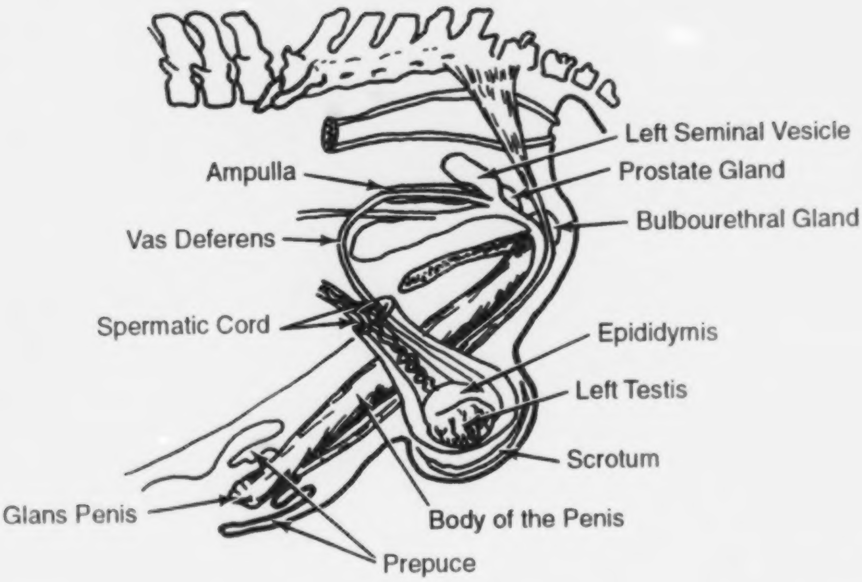
STALLION REPRODUCTIVE SYSTEM


Left Seminal Vesicle
Ampulla
Prostate Gland
Bulbourethral Gland
Vas Deferens
Spermatic Cord
Epididymis
Left Testis
Scrotum
Glans Penis
Body of the Penis
Prepuce

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WRITTEN TEST

HORSE HEALTH AND DISEASE PREVENTION

B1

Name ______________________________ Score __________

OBJECTIVE 1

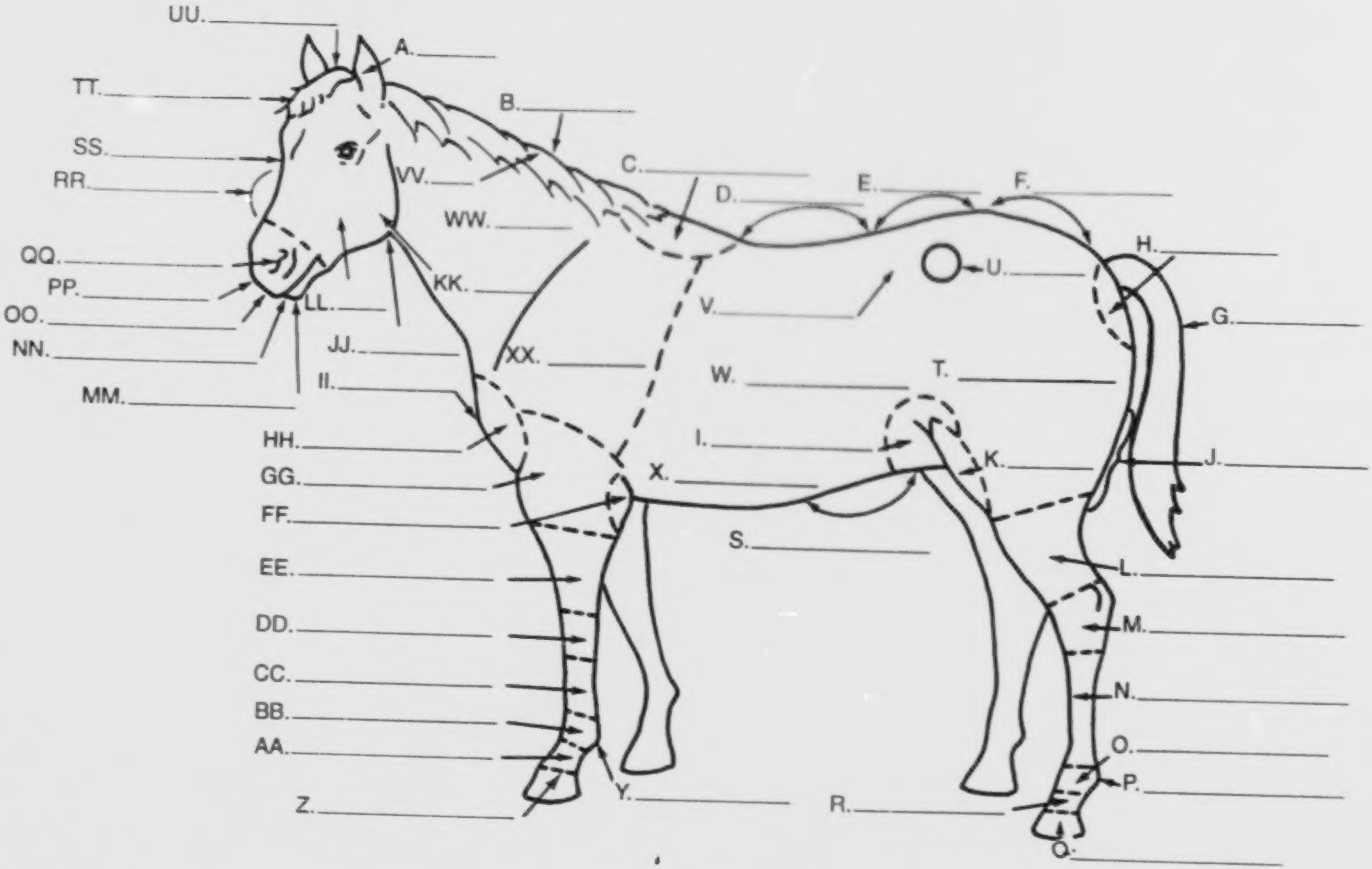
Identify the parts of the horse. Write the correct parts in the blanks provided. The names are given on the following page.

May be photocopied for student use.

Ear
Poll
Forehead
Face
Bridge of Nose
Nostril
Muzzle
Upper lip
Lower lip
Under lip
Cheek
Jaw
Throatlatch
Point of Shoulder
Chest
Arm
Elbow
Forearm
Knee
Cannon
Ankle
Pastern
Coronet
Fetlock
Girth
Crest
Mane
Neck
Shoulder
Withers
Back
Barrel
Coupling
Loin
Point of Hip
Croup
Buttock
Thigh
Tail
Flank
Abdomen
Stifle
Quarter
Gaskin
Hock
Hoof or foot

May be photocopied for student use.

May be photocopied for student use.


UU.
A.
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VV.
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MM.
II.
HH.
I.
GG.
X.
K.
J.
FF.
S.
EE.
L.
DD.
M.
CC.
N.
BB.
AA.
O.
P.
Z.
Y.
R.
Q.

OBJECTIVE 2

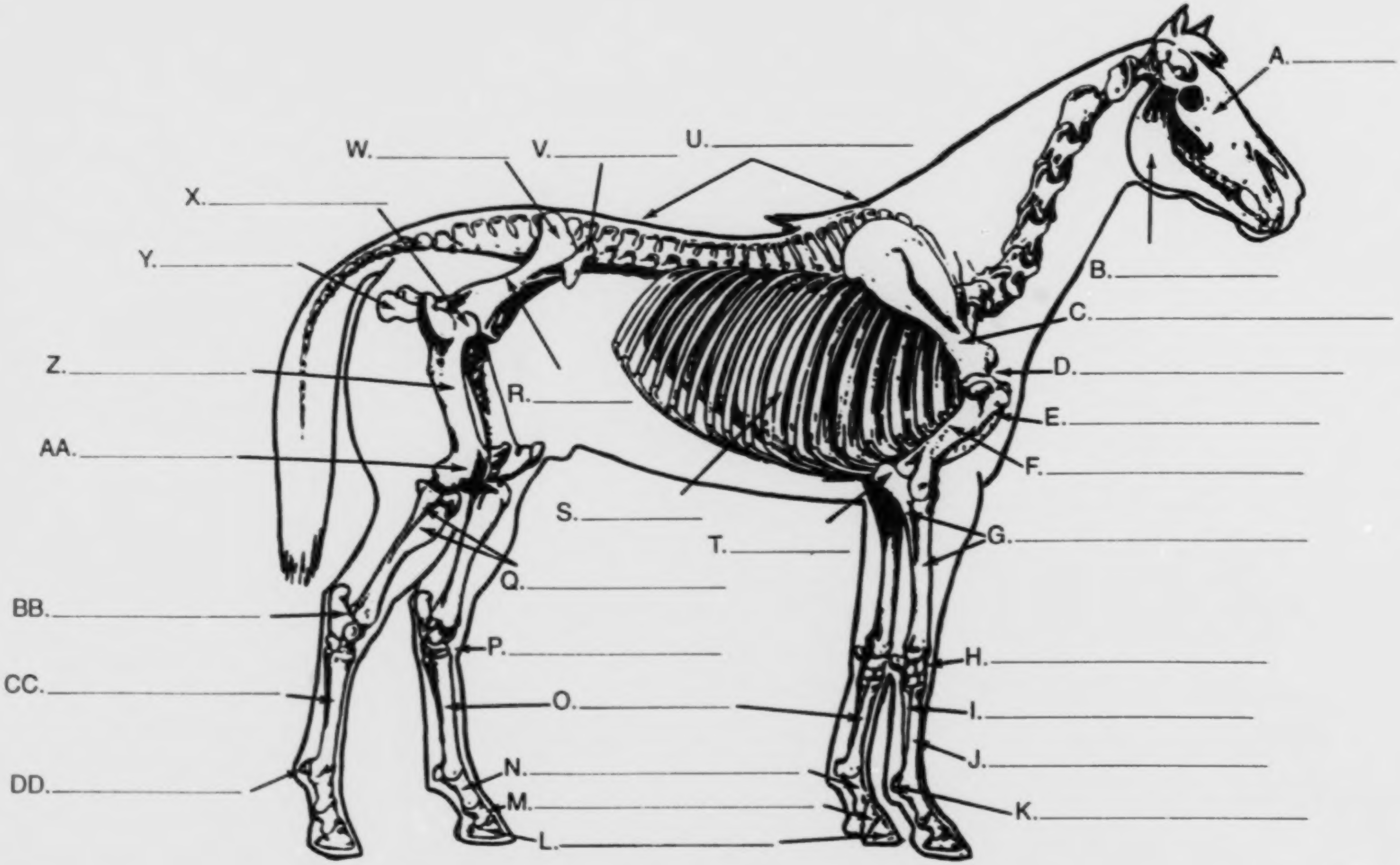
Label the parts of the skeletal system. Write the correct parts in the blanks provided.

Skull
Mandible
Scapula or
  Shoulder Bone
Shoulder Joint
Sternum
Humerus or
  Arm Bone
Radius and
  Ulna (Forearm)
Carpal or Knee
  Bone
Small
  Metacarpal or
  Splint Bone

Large
  Metacarpal
  or Cannon
Sesamoid
Spinous Process
Point of Hip
Point of Croup
Hip Joint
Ischium
Femur or Thigh
Stifle Joint
Tarsus or Hock
Large
  Metatarsal or
  Cannon

Tibia and Fibula
  or Leg Bones
Tarsal or Hock
  Bones
Cannon Bone
1st Phalanx
(Long Pastern)
2nd Phalanx
  (Short Pastern)
3rd Phalanx
  (Coffin)
Pelvis
Ribs
Elbow

May be photocopied for student use.


A.
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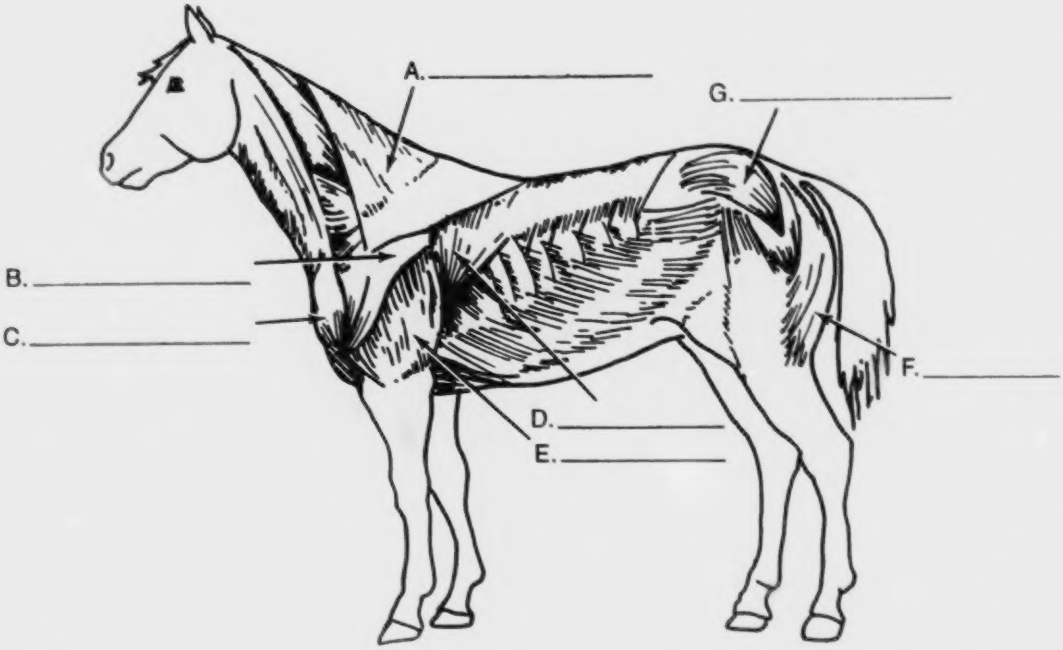
R.
S.
T.
U.
V.
W.
X.
Y.
Z.
AA.
BB.
CC.
DD.

May be photocopied for student use.

OBJECTIVE 3

Label the major parts of the muscular system. Write the correct parts in the blanks provided.

Deltoid
Trapezius
Semitendinosus
Middle Gluteus
Pectorals, superficial
Latissimus dorsi
Triceps brachii

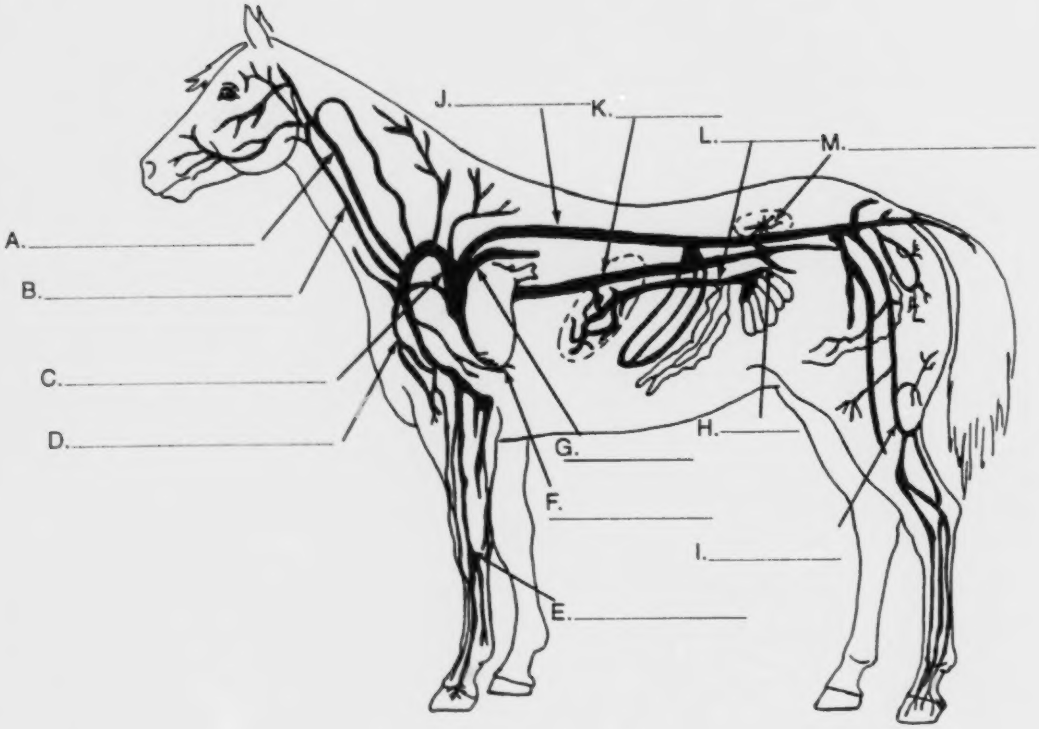


May be photocopied for student use.

OBJECTIVE 4

Label the parts of the circulatory system. Write the correct parts in the blanks provided.

Common Carotid Artery
Jugular Vein
Subclavian Artery
Cephalic Vein
Aorta
Hepatic Vein
Portal Vein
Renal Artery
Pulmonary Artery
Thoracic Artery (Internal)
Median Artery
Mesenteric Artery
Femoral Artery



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OBJECTIVE 5

Select from a list functions of the circulatory system. Place an "X" in front of correct functions.

____ 1. Aids in the immunity to disease

____ 2. Releases perspiration

____ 3. Transports nutrients from the alimentary tract to tissues

____ 4. Acts as a carrier for defense mechanism against microorganisms

____ 5. Regulates the acidity of the body

____ 6. Regulates behavioral changes

____ 7. Removes waste products of metabolism

____ 8. Transports carbon dioxide to tissues

____ 9. Transports oxygen to tissues

____ 10. Acts as a temperature regulator

____ 11. Equalizes water content

____ 12. Transports endocrine secretions

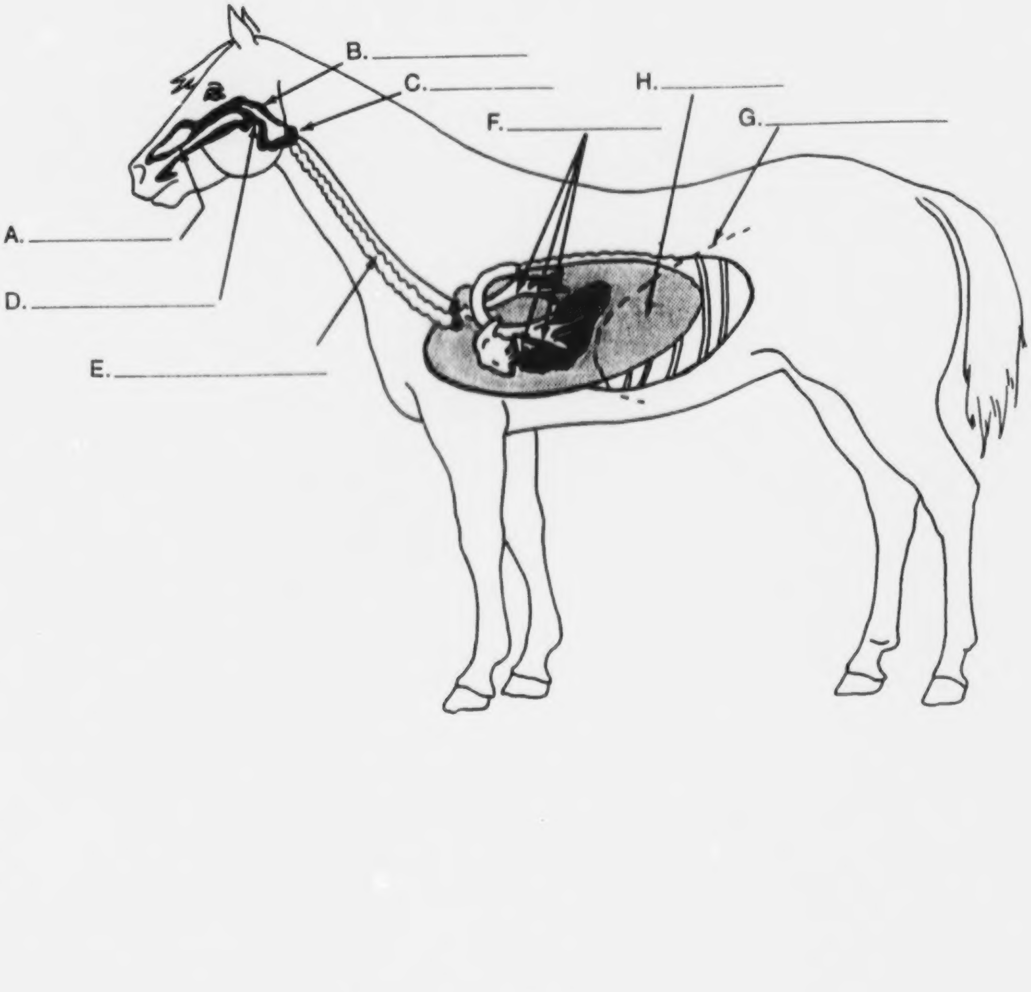
____ 13. Produces muscle tissue

May be photocopied for student use.

OBJECTIVE 6

Label the parts of the respiratory system. Write the correct parts in the blanks provided.

Pharynx	Diaphragm
Larynx	Nasal Passages
Bronchi	Epiglottis
Lungs	Trachea



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OBJECTIVE 7

List functions of the respiratory system. Write the functions in the blanks provided.

1. ____

____

2. ____

____

3. ____

____

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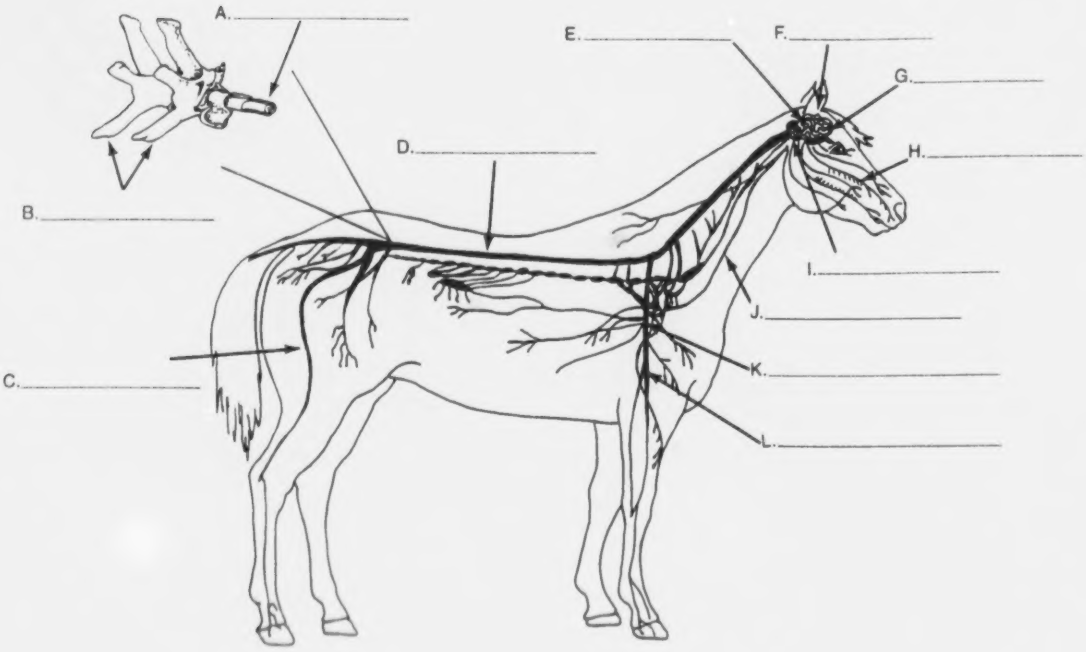
OBJECTIVE 8

Label the parts of the nervous system. Write the correct parts in the blanks provided.

Cerebellum
Brain
Cerebrum
Cranial Nerves
Medulla Oblongata
Sympathetic Nerves
Parasympathetic Nerves (Vagus)
Brachial Plexus
Spinal Cord
Vertebrae
Lumbo-sacral Plexus



May be photocopied for student use.

OBJECTIVE 9

Match parts of the nervous system to their functions. Place the correct letter in the blank.

A. cerebrum
B. spinal cord
C. brain center
D. brachial plexus
E. cerebellum
F. brachial nerve

G. medulla oblongata
H. lumbo-sacral plexus
I. parasympathetic nerves
J. cranial nerves
K. sympathetic nerves
L. primary nerves

____ 1. Supplies feeling to each of the hindlimbs through a network of nerves

____ 2. Controls intelligence, memory, emotion, and senses

____ 3. Supplies feeling to each of the forelimbs through a network of nerves

____ 4. Responsible for muscular coordination and balance

____ 5. Performs intermediary function between the brain and other parts of the body

____ 6. Soothe the resting horse by lowering blood pressure, constricting the bronchi, and increasing digestive activity

____ 7. Controls involuntary actions

____ 8. Activate "flight or fright" mechanism

____ 9. Serve each side of the body; twelve pair emerge through openings in the skull

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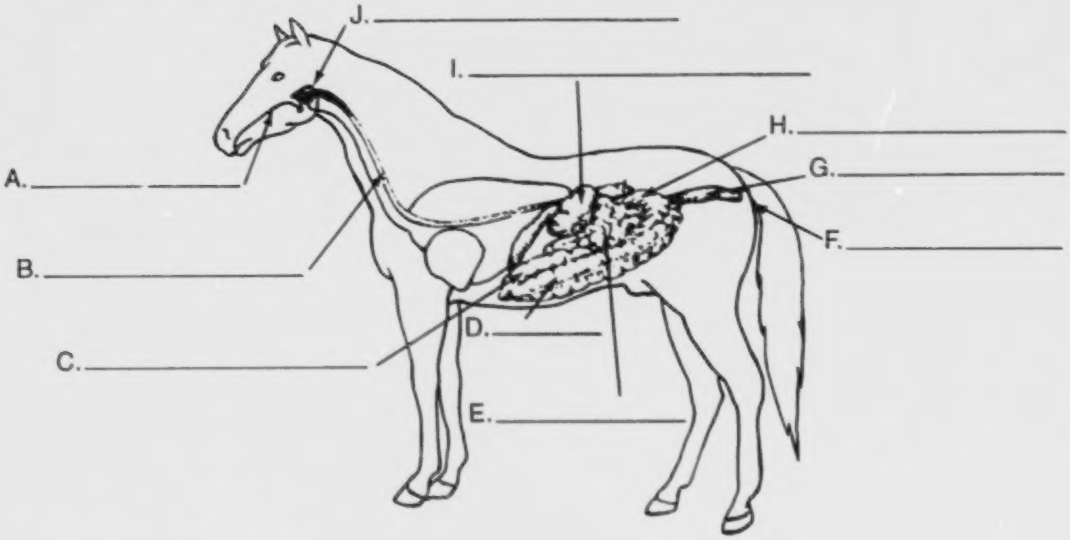
OBJECTIVE 10

Label the parts of the digestive system. Write the correct parts in the blanks provided.

Pharynx
Cavity of Mouth
Esophagus
Cecum
Large Colon
Stomach
Small Intestine
Small Colon
Rectum
Anus



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OBJECTIVE 11

Match parts of the digestive system to their descriptions.
Place the correct letter in the blank.

A. rectum
B. mouth
C. pharynx
D. bladder
E. stomach
F. esophagus
G. kidney
H. small intestine
I. cecum
J. large colon
K. appendix
L. small colon

_____ 1. Holds waste material until it is passed out of the horse's body through the anal opening

_____ 2. Contains relatively solid materials which are formed into balls of dung

_____ 3. Chewing mechanism; secretes saliva to act as a digestive juice and to lubricate food for swallowing

_____ 4. Muscular passage which connects the mouth and the esophagus

_____ 5. Tube providing passage of food from the pharynx to the stomach

_____ 6. J-shaped muscular sac between the esophagus and the small intestine that secretes gastric juices by which proteins and fats are broken down

_____ 7. Provides further breakdown of proteins, fats, and sugars which have escaped the breakdown by gastric juices

_____ 8. Contains semifluid for digestion which is mostly accomplished by bacterial fermentation and absorption

_____ 9. Contains mostly fluids; forms fatty acids and some vitamins

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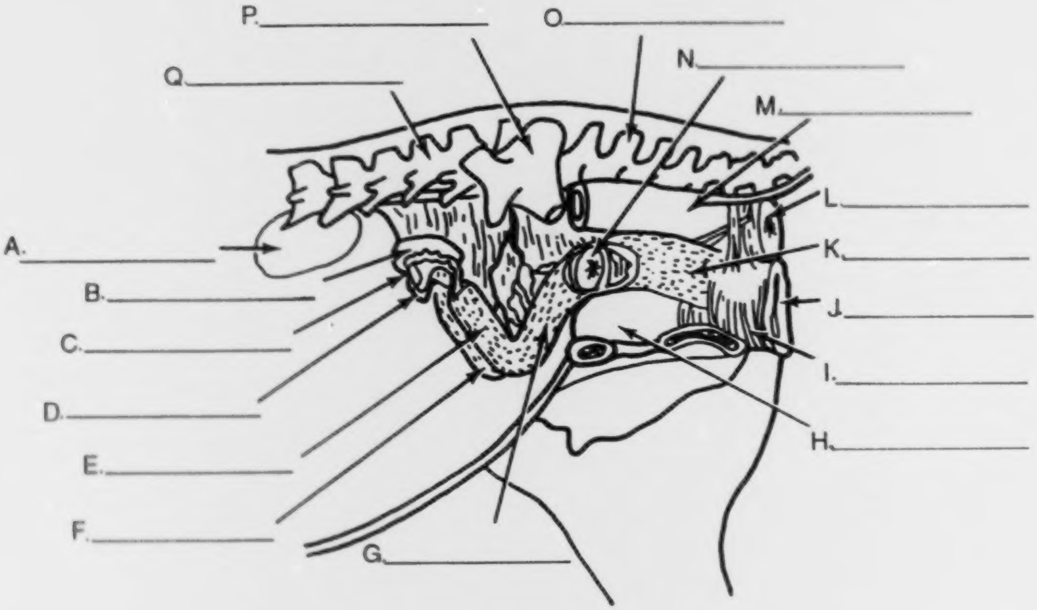
OBJECTIVE 12

Label the parts of the reproductive system of the mare. Write the correct parts in the blanks provided.

- Infundibulum
- Fallopian tube
- Ovary
- Uterine horn (left)
- Uterine horn (right)
- Body of uterus
- Kidney
- Bladder
- Cervix
- Vagina
- Vulva
- Rectum
- Anus
- Labia
- Lumbar vertebra
- Pelvis
- Sacral vertebra



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OBJECTIVE 13

Match parts of the mare reproductive system to their functions. Write the correct letter in the blank.

A. vulva
B. ovary
C. bladder
D. oviduct
E. vagina
F. colon
G. uterus
H. pharynx

____ 1. External opening of the reproductive system

____ 2. Produces ovum and hormones necessary for normal reproductive functioning

____ 3. Small, paired tubes extending from each ovary to the uterus

____ 4. Composed of body, horns, and cervix; responsible for accommodating the developing fetus

____ 5. Forms a sheath for the acceptance of the penis during the breeding process; part of the birth canal between the uterus and the vulva

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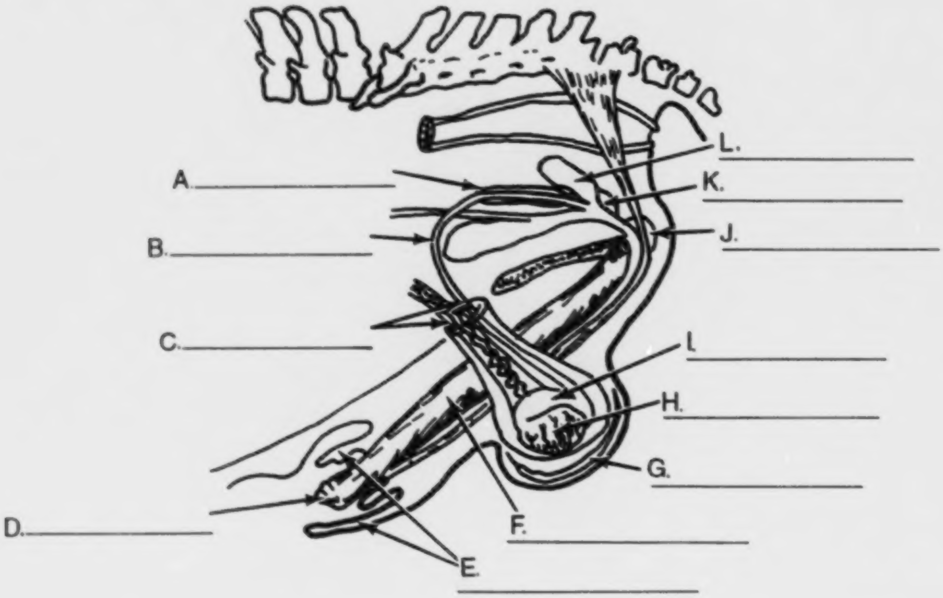
OBJECTIVE 14

Label the parts of the reproductive system of the stallion. Write the correct parts in the blanks provided.

- Bulbourethral gland
- Prostate gland
- Left seminal vesicle
- Ampulla
- Vas Deferens
- Spermatic cord
- Epididymis
- Left testis
- Scrotum
- Body of penis
- Glans penis
- Prepuce



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OBJECTIVE 15

Match parts of the stallion reproductive system to their functions. Write the correct letter in the blank.

A. penis
B. testes
C. bladder
D. scrotum
E. epididymis
F. vas deferens
G. urethra
H. accessory sex glands

_____ 1. Produce sperm and the male sex hormone, testosterone

_____ 2. Thin, pliable skin which houses the testes

_____ 3. Transport tube for sperm from testes to vas deferens

_____ 4. Muscular tube propelling sperm during ejaculation

_____ 5. Aids in ejaculation of semen and in expulsion of urine

_____ 6. Includes ampullae, seminal vesicles, prostate gland, and bulbourethral gland; their main function is to produce the majority of components in semen

_____ 7. External organ used for depositing semen in female reproductive tract

May be photocopied for student use.

OBJECTIVE 16

Describe the endocrine system. Describe the endocrine system in the blanks provided.

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May be photocopied for student use.

OBJECTIVE 17

List characteristics of a healthy horse. List the characteristics in the blanks provided.

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________
6. ______________________________
7. ______________________________
8. ______________________________

OBJECTIVE 18

List the vital signs and their normal ranges. Write the vital signs and their normal ranges in the blanks provided.

____

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May be photocopied for student use.

OBJECTIVE 19 **Evaluated on the Job Sheet.**

OBJECTIVE 20 **Select from a list components essential for maintaining an effective health care program.** Place an "X" in front of components essential for maintaining an effective health care program.

____ 1. Maintaining clean sheaths and udders

____ 2. Checking daily for injuries or disease

____ 3. Never treat the horse yourself

____ 4. Keeping accurate records

____ 5. Administering hoof care

____ 6. Grooming daily

____ 7. Always keep horse separated from other horses

____ 8. Keeping teeth in good condition

____ 9. Controlling parasites

____ 10. Maintaining good nutrition

____ 11. Do not feed concentrates

____ 12. Being aware of equine diseases and latest research

____ 13. Avoiding high risk situations

____ 14. Have veterinarian come out every two years

____ 15. Organizing immunization program

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OBJECTIVE 21

List diseases which may be prevented by immunization. Write the diseases in the blanks provided.

1. ____________________
2. ____________________
3. ____________________
4. ____________________
5. ____________________
6. ____________________
7. ____________________

OBJECTIVE 22

Describe treatment of a new horse that has just been purchased or brought on the farm/ranch. Describe the treatment in the blanks provided.

____

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____

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____

May be photocopied for student use.

OBJECTIVE 23 **Complete a chart on infectious diseases.** Complete the chart given below.

Disease	**Symptoms**	**Prevention**	**Treatment**
Equine Influenza	Fever, cough, runny eyes, clear nasal discharge, decreased appetite, stiffness	1. __________	Isolation, rest and proper nursing care
Anthrax	High fever, swelling on the neck, throat, and lower abdomen, bloody discharges; death	2. __________ __________ __________	Antibiotics; quarantine infected horses
Equine encephalomyelitis (sleeping sickness)	High fever, loss of coordination, tongue hanging out, ears and lips drooping, paralysis	3. __________	Proper nursing care
Equine infectious anemia (swamp fever)	High fever, anemia, weakness, swelling of lower abdomen and legs, weight loss, enlarged spleen, jaundiced	Isolate new horses until negative Coggins test is obtained	4. ________ ________ ________
Pneumonia	5. ______________ ______________	Good management practices	Antibiotics if bacterial cause
Rabies	Weakness, difficulty walking, paralysis	Vaccination	6. ________ ________
Rhinopneumonitis	Similar to equine influenza	7. __________	Proper nursing care, treatment of secondary complications
Strangles	Moderate to high fever, loss of appetite, nasal discharge, cough, swollen lymph nodes	8. __________ __________ __________	Isolation, proper nursing care, veterinary treatment

Disease	**Symptoms**	**Prevention**	**Treatment**
Equine viral arteritis	Respiratory illness is similar to influenza, redness and swelling of the eyes, loss of appetite, colic, diarrhea, dehydration, abortion	Vaccination	9. ________ ________ ________ ________
Tetanus	Appearance of film over the inner third of the eyes, muscle spasms causing stiffness, tail held out, ears erect, jaw muscles contract and horse can't open mouth	10. ________	Proper nursing care, veterinary treatment
Potomac Horse Fever	11. ____________ ____________ ____________	Vaccination	Antibiotics, proper nursing care

OBJECTIVE 24

List means by which infectious diseases are passed from one horse to another. Write the diseases in the blanks provided.

1. ____
2. ____
3. ____
4. ____
5. ____

May be photocopied for student use.

OBJECTIVE 25 | **Complete a chart on noninfectious diseases.** Complete the chart given below.

Condition	**Cause**	**Symptoms**	**Prevention**	**Treatment**
Colic	Various causes; intestinal parasites, poor feed, moldy feed	Expression of abdominal pain, tail switching, rolling, pawing	1. ________ ________ ________ ________	Varies with type of colic; walking, laxatives, analgesics, surgery in some cases
Laminitis (founder)	Excessive intake of feed, drinking large quantities of cold water when overheated, retained placenta	2. ________ ________ ________ ________ ________	Proper feeding management	Acute: immediate veterinary care Chronic: proper foot care, corrective trimming and shoeing
Azoturia and Tying Up Syndrome	Occurs in athletic horses on a ration high in carbohydrates who have stopped exercising	3. ________ ________ ________ ________ ________	Reduce diet when inactive	Veterinary care, selenium and vitamin E may prevent recurrent attacks; do NOT walk horse
Roaring	Paralysis of one of the recurrent laryngeal nerves	4. ________ ________ ________ ________ ________	May be inherited as a simple recessive trait; prevent damage to nerves such as from respiratory infections	Surgery

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Condition	Cause	Symptoms	Prevention	Treatment
Emphysema	5. _______ _______ _______ _______ _______ _______ _______ _______	Chronic bronchitis: chronic cough, shortness of breath Chronic bronchiolitis (heaves): deep dry cough, wheezing, weight loss, increased rate of breathing	Provide fresh air and control dust	Mucolytics and expectorants, vaporizer, control dust, antibiotics for acute infectious relapses

OBJECTIVE 26

Select from a list items to be recorded in case history. Place an "X" in front of items to be recorded.

_____ 1. Farrier records

_____ 2. Every time horse is ridden

_____ 3. Past ownerships

_____ 4. Use

_____ 5. Ration

_____ 6. Amount of water consumed

_____ 7. Dental records

_____ 8. Deworming dates and anthelmintics

_____ 9. Desired temperature environment for horse

_____ 10. Past medications

_____ 11. Immunization history

_____ 12. Past illnesses, injuries, and allergies

_____ 13. Age, breed, color, and sex.

OBJECTIVE 27

Evaluated on the Assignment Sheet.

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A LOT TO KNOW

Caring for horses requires an understanding of the anatomy, physiology, and health care requirements of horses. Horses, like other mammals, are complex and have many interdependent body systems. Systems such as the skeletal, muscular, circulatory, respiratory, reproductive, and endocrine are all vital and must be functioning properly for the horse to maintain good health. Basic knowledge of the different systems will enable the horse owner or caretaker to better understand and care for problems the horse may develop.

In addition the horse owner or caretaker must know about infectious and noninfectious equine diseases and precautions to take regarding diseases. Many equine diseases can be prevented with vaccinations. All horses should be kept current on equine vaccinations. A veterinarian should be consulted regarding vaccinations and vaccination schedules for horses. Ensuring that vaccinations are current is much easier than treating a disease. For example, giving the tetanus vaccination is much better than caring for a horse after possible exposure to tetanus.

Horses depend on owners and caretakers to provide the proper care for them. Without good health any horse cannot perform to its full potential. Ensuring proper care requires that owners and caretakers educate themselves and keep current on horse health issues. Horses can be serviceable for a long period of time if given the proper care throughout their lives. But the horse's serviceable life can also be greatly diminished if the horse does not receive proper care. Although there are some health problems that are not easily preventable and that even with proper care may develop, there are also many health problems that can be prevented through proper care.

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LAP
SHEET

BASIC FIRST AID

B2

Check the blank as you complete each step.

1. **Take** ___ the pretest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.

2. **Read** ___ the introduction, unit objective, and specific objectives.

3. **Do** ___ the focus assignments.

4. **Stop** ___ and have your instructor evaluate your work from the focus assignment. After your work has been evaluated, follow your instructor's recommendations.

5. **Study** ___ the Information Sheet, objectives 1-4.

6. **Ask** ___ your instructor to demonstrate the guidelines and procedures in Job Sheet 1. Use the Job Sheet to follow along. Pay careful attention to any guidelines, cautions, and warnings.

7. **Practice** ___ the procedures demonstrated by your instructor. Use the Job Sheet as a guide. Notify your instructor when you are ready to perform the procedures for evaluation.

8. **Stop** ___ and have your instructor evaluate your work from the Job Sheet. After your work has been evaluated, follow your instructor's recommendations.

9. **Study** ___ the Information Sheet, objectives 6-9.

10. **Do** ___ Assignment Sheet 1.

11. **Stop** ___ and have your instructor evaluate your work from the Assignment Sheet. After your work has been evaluated, follow your instructor's recommendations.

12. **Do** ___ Assignment Sheet 2.

May be photocopied for student use.

13. **Stop** ___ and have your instructor evaluate your work from the Assignment Sheet. After your work has been evaluated, follow your instructor's recommendations.

14. **Study** ___ the Information Sheet, objective 12.

15. **Ask** ___ your instructor to demonstrate the guidelines and procedures in Job Sheet 2. Use the Job Sheet to follow along. Pay careful attention to any guidelines, cautions, and warnings.

16. **Practice** ___ the procedures demonstrated by your instructor. Use the Job Sheet as a guide. Notify your instructor when you are ready to perform the procedures for evaluation.

17. **Stop** ___ and have your instructor evaluate your work from the Job Sheet. After your work has been evaluated, follow your instructor's recommendations.

18. **Ask** ___ your instructor to demonstrate the guidelines and procedures in Job Sheet 3. Use the Job Sheet to follow along. Pay careful attention to any guidelines, cautions, and warnings.

19. **Practice** ___ the procedures demonstrated by your instructor. Use the Job Sheet as a guide. Notify your instructor when you are ready to perform the procedures for evaluation.

20. **Stop** ___ and have your instructor evaluate your work from the Job Sheet. After your work has been evaluated, follow your instructor's recommendations.

21. **Take** ___ the posttest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.

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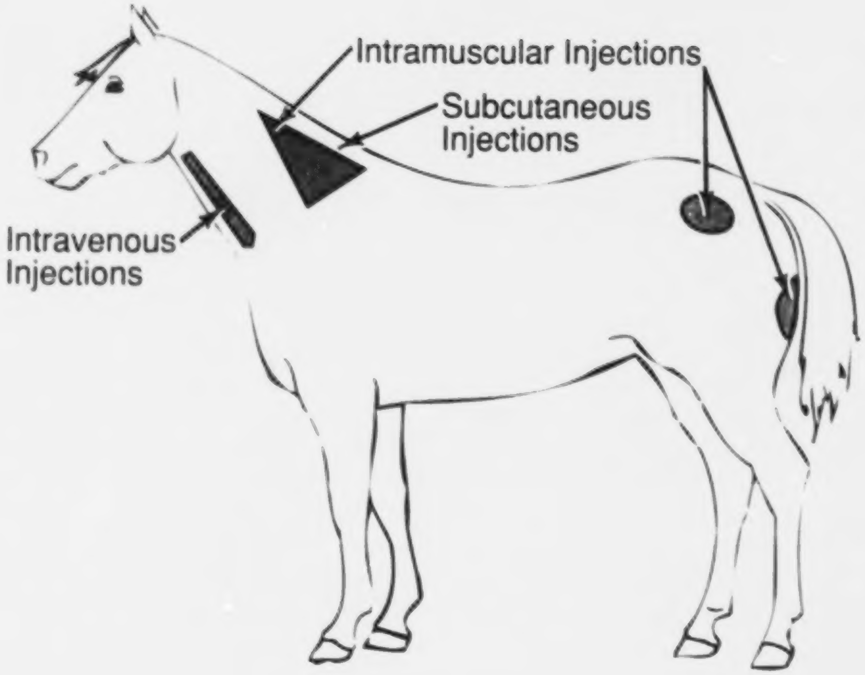
TM

INJECTION SITES


Intramuscular Injections
Subcutaneous Injections
Intravenous Injections

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WRITTEN TEST

BASIC FIRST AID

B2

Name ______________________ Score __________

OBJECTIVE 1

List items for the basic first aid kit. List items for the basic first aid kit in the blanks provided.

RESOURCES

1. ______________________
2. ______________________

EQUIPMENT

3. ______________________
4. ______________________
5. ______________________
6. ______________________
7. ______________________
8. ______________________
9. ______________________
10. ______________________
11. ______________________

MEDICINE

12. ______________________
13. ______________________
14. ______________________
15. ______________________

May be photocopied for student use.

SUPPLIES

16. ______

17. ______

18. ______

19. ______

20. ______

OTHER ITEMS

21. ______

22. ______

23. ______

24. ______

25. ______

26. ______

27. ______

OBJECTIVE 2

List visual symptoms of abnormal health. Write the visual symptoms of abnormal health in the blanks provided.

1. ______

2. ______

3. ______

4. ______

5. ______

6. ______

7. ______

8. ______

9. ______

May be photocopied for student use.

OBJECTIVE 3

Discuss suggestions for basic treatment of wounds. Write suggestions for basic treatment of wounds in the blanks provided.

OBJECTIVE 4

Select from a list basic usages of bandages. Place an "X" in front of basic usages of bandages.

____ 1. Prevent hair growth near the wound

____ 2. Protect wounds and maintain wound dressing

____ 3. Stop excessive blood loss

____ 4. Assist wound in drying out

____ 5. Add protection in hauling

____ 6. Keep legs warm

____ 7. Provide support for strains, sprains, and fractions

____ 8. Reduce and control soft tissue swelling

____ 9. Reduce circulation

____ 10. Support the sound leg when the opposite leg is injured and unable to support weight

May be photocopied for student use.

OBJECTIVE 5 **Evaluated on Job Sheet 1.**

OBJECTIVE 6 **List symptoms of colic.** Write the symptoms of colic in the blanks provided.

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________
6. ______________________________
7. ______________________________
8. ______________________________
9. ______________________________
10. ______________________________
11. ______________________________
12. ______________________________
13. ______________________________
14. ______________________________

OBJECTIVE 7 **Describe actions to take before the vet arrives to care for a horse with colic.** Write actions to take in the blanks provided.

____

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____

May be photocopied for student use.

____

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____

OBJECTIVE 8

Distinguish between critical and noncritical injuries and illnesses. Place a "C" before critical injuries and an "N" before noncritical injuries.

____ 1. The horse is off feed for a 12-hour period

____ 2. Slight lameness in one foot

____ 3. Profuse bleeding from an artery or vein

____ 4. Runny nose and cough

____ 5. Lameness in both front feet

____ 6. Swelling in lower limb

____ 7. Acute abdominal pain in which the animal wants to roll or kick and/or bite at its abdomen

____ 8. Abnormal foaling

____ 9. Superficial wound

____ 10. Acute lameness in which the animal is able to move only with great pain

____ 11. Any situation which might permanently affect the horse in a detrimental manner

433

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OBJECTIVE 9

Discuss basic care procedures for a horse during time of injury or illness. Write basic care procedures in the blanks provided.

____

____

____

____

____

____

____

OBJECTIVE 10

Evaluated on Assignment Sheet 1.

OBJECTIVE 11

Evaluated on Assignment Sheet 2.

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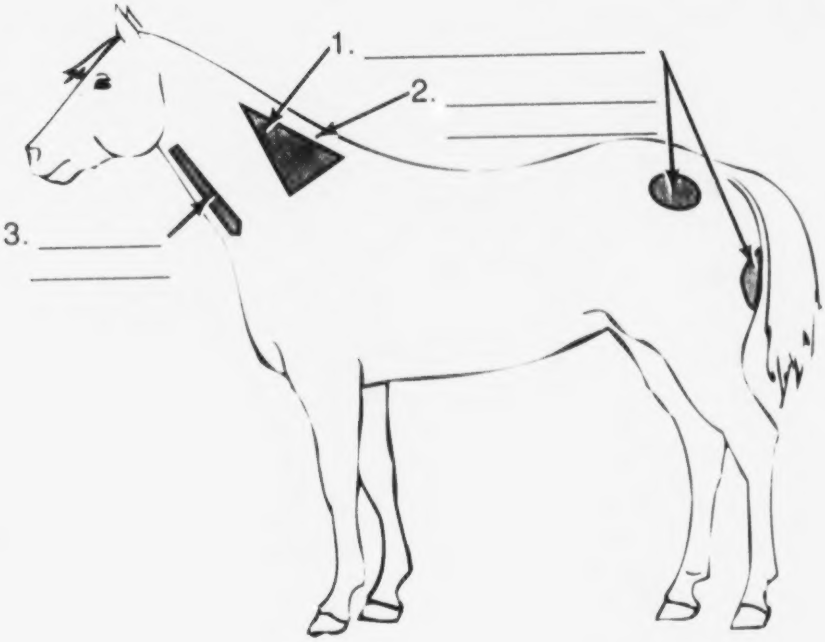
OBJECTIVE 12 **Label intramuscular, subcutaneous, and intravenous injection sites.** Write the name of the injection site in the blanks provided.



OBJECTIVE 13 **Evaluated on Job Sheet 2.**

OBJECTIVE 14 **Evaluated on Job Sheet 3.**

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WOULD YOU KNOW WHAT TO DO?

Case 1

Thomas was just beginning to feed his horses in the evening. He noticed that the 6-year-old gelding was lame. He watched the horse walk around and noticed that both front feet appeared slightly lame. He noticed that a gate was unlatched in the small pasture where the gelding was kept. He quickly checked the feed and observed that the gelding had probably gotten into some of the feed. He quickly went back to the house and phoned his veterinarian.

Case 2

Jackie went to check on her mare in the pasture. The mare had a cut on her foreleg which was still bleeding. Jackie did not look at the wound closely but ran up to the house to call a veterinarian. She had recently moved and did not have an equine veterinarian for her new area. She become upset and started to panic.

Case 3

Howard had saddled his gelding and was going to take a short ride. When he mounted and started walking, he noticed that the gelding was walking differently than usual. He immediately dismounted, and led the horse around to observe its feet. He noticed that the right front foot was slightly lame. He decided not to ride any more and took the saddle and bridle off the horse. He then put the gelding in a small pen and took notes of the lameness.

Case 4

Jane and Mark had always wanted a foal. They bred their mare and she was now in labor. The mare appeared to be having difficulty delivering and twenty minutes after her water broke the foal was still not delivered. Jane and Mark had never seen a birth before and they assumed the delivery would progress with time so they did not call a veterinarian.

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LAP SHEET

PARASITES

B3

Check the blank as you complete each step.

1. **Take** ___ the pretest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.
2. **Read** ___ the introduction, unit objective, and specific objectives.
3. **Do** ___ the focus assignments.
4. **Stop** ___ and have your instructor evaluate your work from the focus assignment. After your work has been evaluated, follow your instructor's recommendations.
5. **Study** ___ the Information Sheet, objectives 1-9.
6. **Do** ___ Assignment Sheet 1.
7. **Stop** ___ and have your instructor evaluate your work from the Assignment Sheet. After your work has been evaluated, follow your instructor's recommendations.
8. **Study** ___ the Information Sheet, objective 11.
9. **Do** ___ Assignment Sheet 2.
10. **Stop** ___ and have your instructor evaluate your work from the Assignment Sheet. After your work has been evaluated, follow your instructor's recommendations.
11. **Take** ___ the posttest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.

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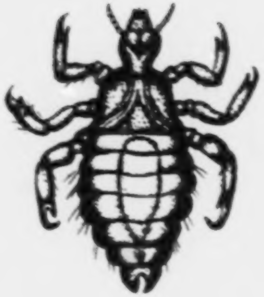
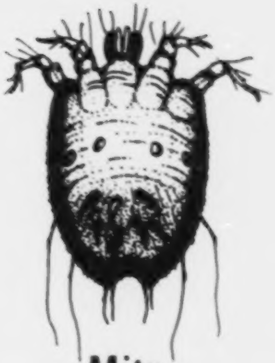
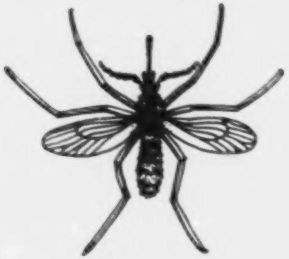
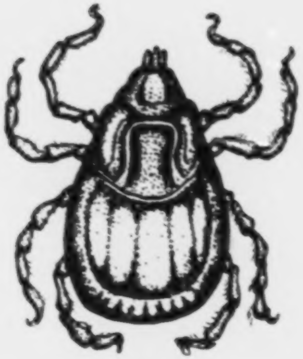
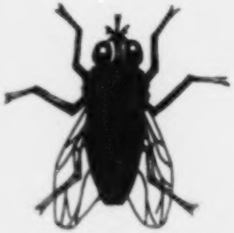
External Parasites

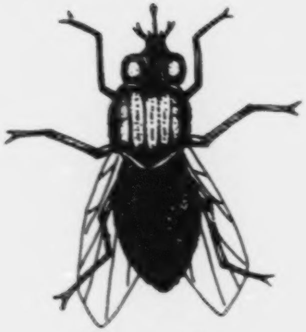

Lice

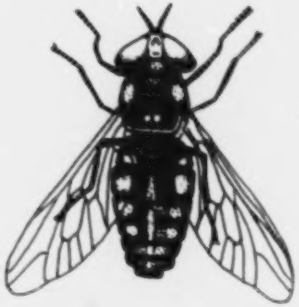

Mite

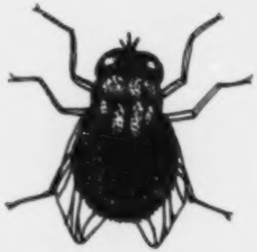

Mosquito


Tick


Horn Fly


Barn Fly


Horse Fly


Screwworm Fly

TM 1

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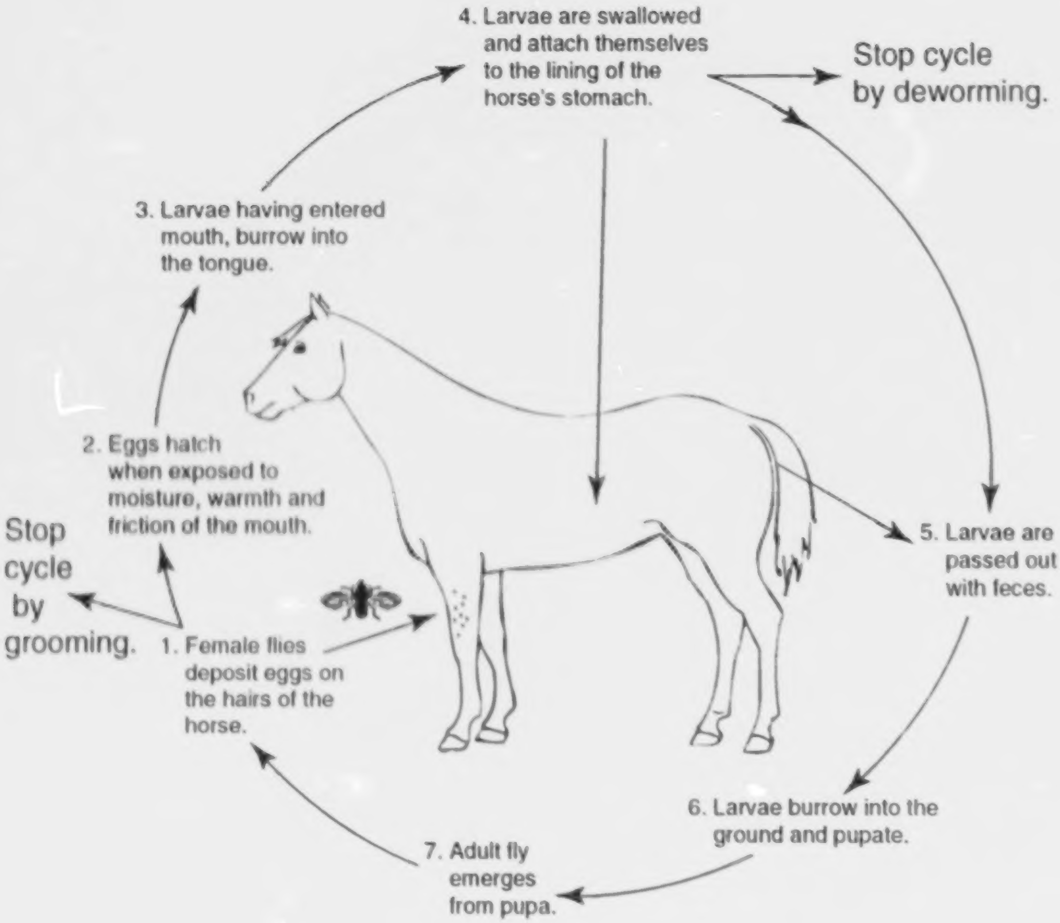
INSTRUCTOR'S RESOURCE PACKAGE - Equine Management and Production
TRANSPARENCY MASTER 1 - **CIMC** - B3 - 1

BOTS



1. Female flies deposit eggs on the hairs of the horse.
2. Eggs hatch when exposed to moisture, warmth and friction of the mouth.
3. Larvae having entered mouth, burrow into the tongue.
4. Larvae are swallowed and attach themselves to the lining of the horse's stomach.
5. Larvae are passed out with feces.
6. Larvae burrow into the ground and pupate.
7. Adult fly emerges from pupa.

Stop cycle by grooming.

Stop cycle by deworming.

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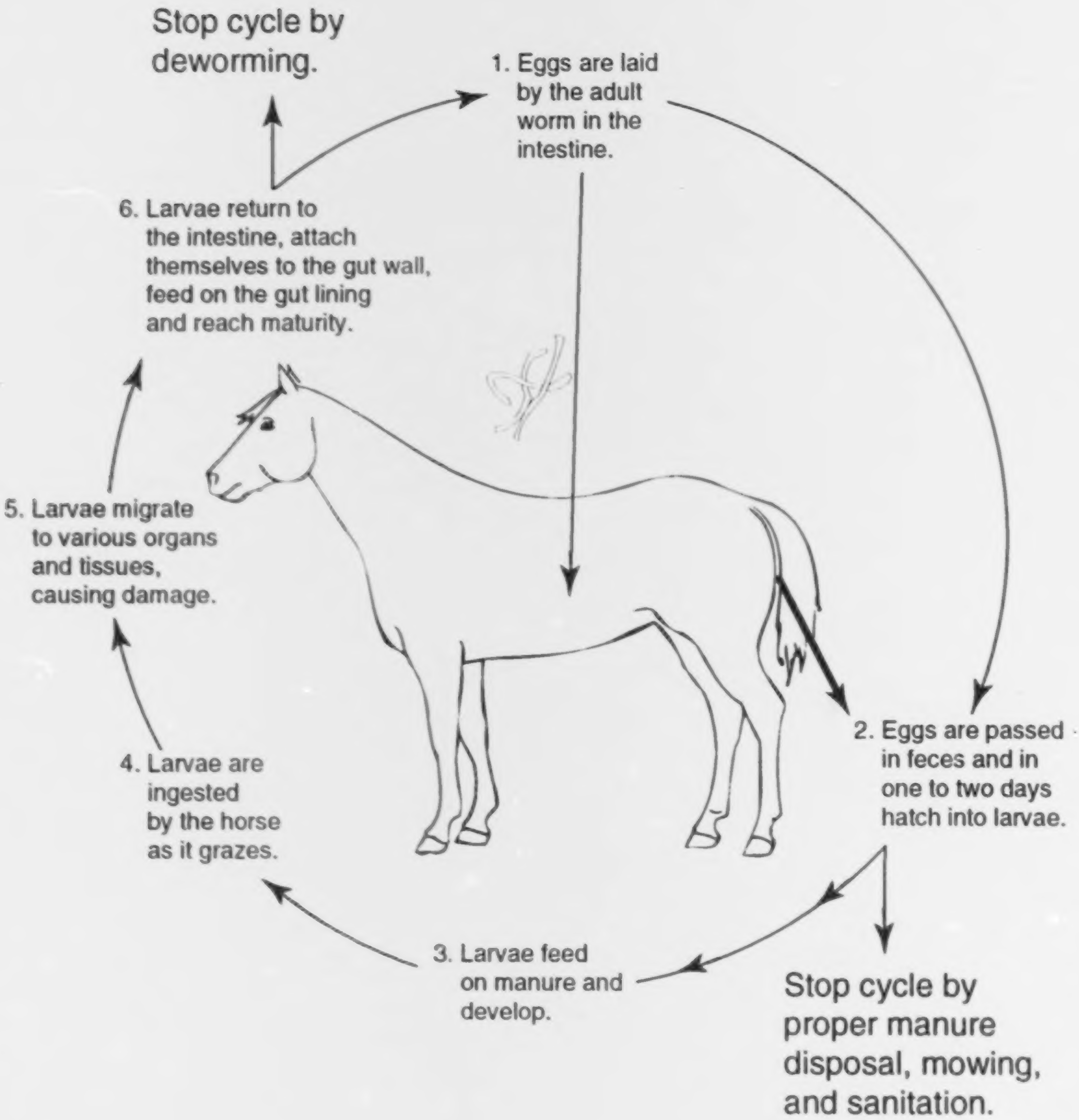
STRONGYLES



Stop cycle by deworming.

1. Eggs are laid by the adult worm in the intestine.

2. Eggs are passed in feces and in one to two days hatch into larvae.

Stop cycle by proper manure disposal, mowing, and sanitation.

3. Larvae feed on manure and develop.

4. Larvae are ingested by the horse as it grazes.

5. Larvae migrate to various organs and tissues, causing damage.

6. Larvae return to the intestine, attach themselves to the gut wall, feed on the gut lining and reach maturity.

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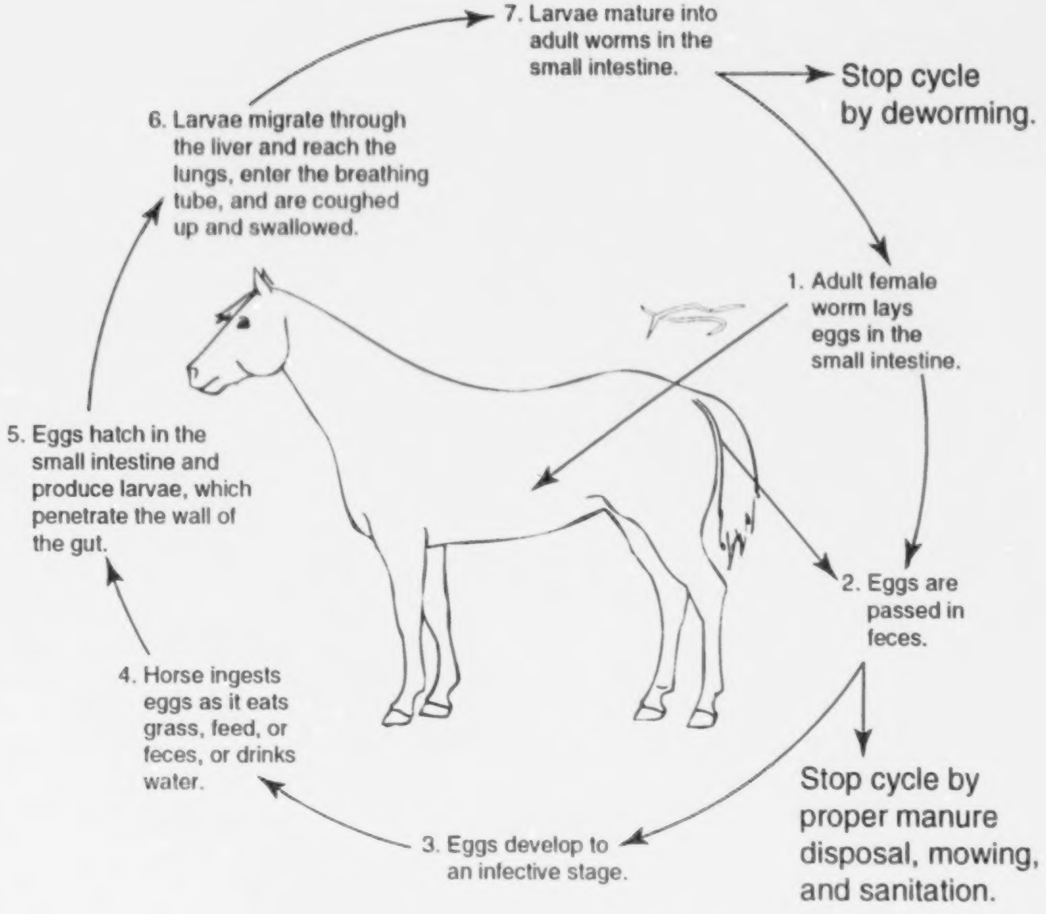
ASCARIDS



7. Larvae mature into adult worms in the small intestine.

Stop cycle by deworming.

1. Adult female worm lays eggs in the small intestine.

2. Eggs are passed in feces.

Stop cycle by proper manure disposal, mowing, and sanitation.

3. Eggs develop to an infective stage.

4. Horse ingests eggs as it eats grass, feed, or feces, or drinks water.

5. Eggs hatch in the small intestine and produce larvae, which penetrate the wall of the gut.

6. Larvae migrate through the liver and reach the lungs, enter the breathing tube, and are coughed up and swallowed.

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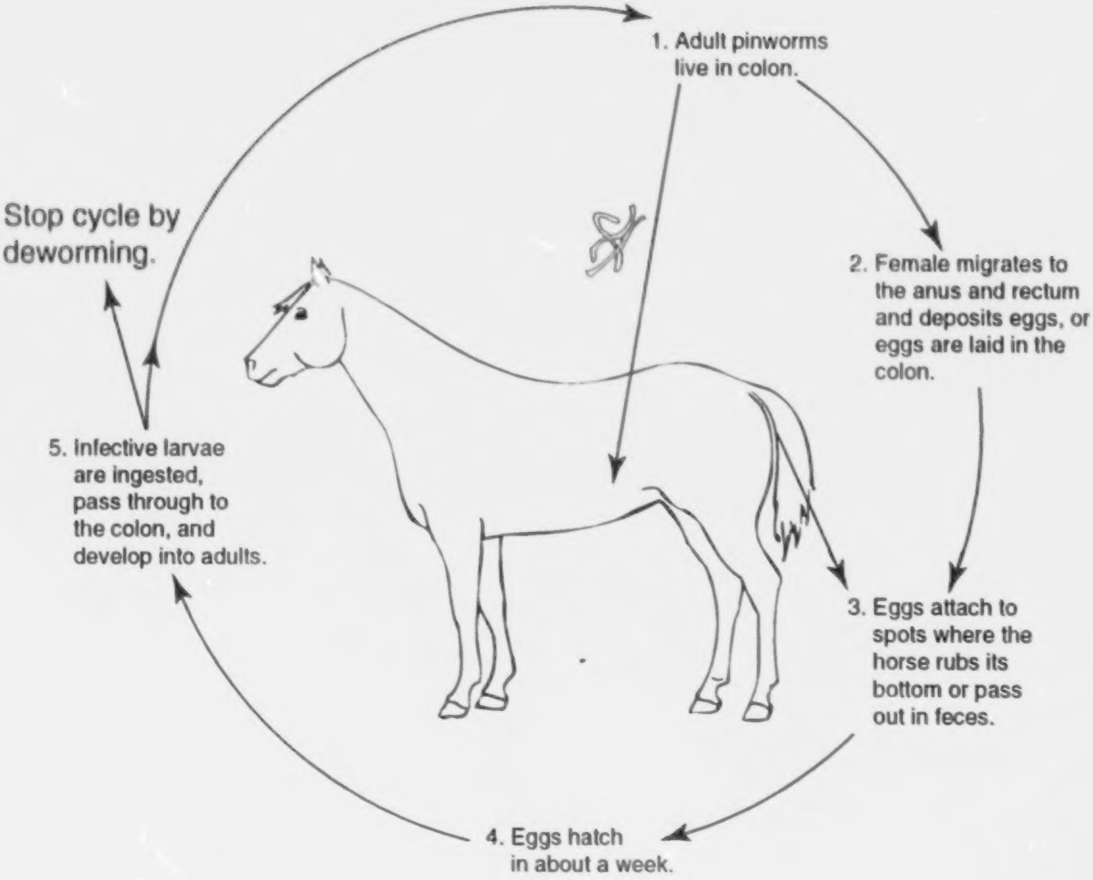
PINWORMS

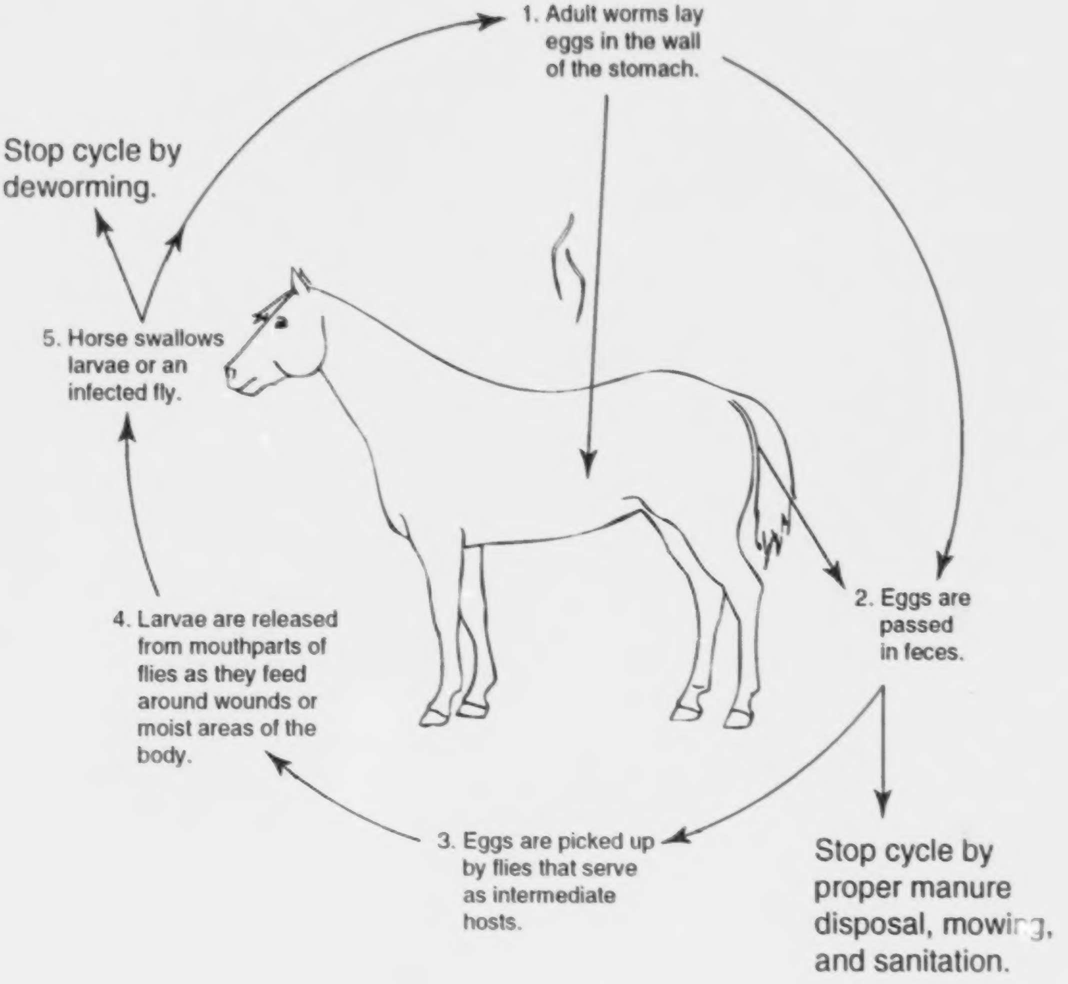


1. Adult pinworms live in colon.
2. Female migrates to the anus and rectum and deposits eggs, or eggs are laid in the colon.
3. Eggs attach to spots where the horse rubs its bottom or pass out in feces.
4. Eggs hatch in about a week.
5. Infective larvae are ingested, pass through to the colon, and develop into adults.

Stop cycle by deworming.

May be photocopied for student use.

HABRONEMA



1. Adult worms lay eggs in the wall of the stomach.

2. Eggs are passed in feces.

Stop cycle by proper manure disposal, mowing, and sanitation.

3. Eggs are picked up by flies that serve as intermediate hosts.

4. Larvae are released from mouthparts of flies as they feed around wounds or moist areas of the body.

5. Horse swallows larvae or an infected fly.

Stop cycle by deworming.

May be photocopied for student use.

WRITTEN TEST

PARASITES

B3

Name ______________________________ Score __________

OBJECTIVE 1

Select from a list general symptoms of parasitic infection.
Place an "X" in front of correct responses.

____ 1. Weakness

____ 2. Increase in weight

____ 3. Rubbing, itching, or biting

____ 4. Colic, diarrhea, cough, and lameness in severe cases

____ 5. Unhealthy appearance

____ 6. Excessive drinking of water

____ 7. Poor hair coat

____ 8. Inability to gain or maintain weight

____ 9. Bright, alert eyes

____ 10. Distended belly with ribs showing (potbelly)

____ 11. Stunted growth and development in young horses

____ 12. Tucked up flanks

May be photocopied for student use.

OBJECTIVE 2

Classify parasites as internal or external. Place an "I" before internal parasites and an "E" before external parasites.

_____ 1. Habronema

_____ 2. Bots

_____ 3. Flies

_____ 4. Lice

_____ 5. Strongyles

_____ 6. Mites

_____ 7. Ascarids

_____ 8. Ticks

_____ 9. Pinworms

_____ 10. Strongyloides

_____ 11. Mosquitoes

_____ 12. Tapeworms

_____ 13. Gnats

May be photocopied for student use.

OBJECTIVE 3

Match internal parasites to their descriptions. Place the correct letter in the blank.

A. bots
B. gnats
C. pinworms
D. mites
E. tapeworms
F. strongyles
G. ascarids
H. strongyloides
I. habronema
J. larvae

_____ 1. Stomach worms that are responsible for inflammation in the stomach and/or for a condition of external sores referred to as "summer sores"

_____ 2. Small worms that tend to form clusters at the valve region of the cecum; rarely cause problems unless present in exaggerated numbers

_____ 3. Larvae of the botfly; eggs are deposited on the horse by fly mainly on the inside of the knees and under the abdomen, and may migrate to internal parts of the horse's body

_____ 4. Intestinal threadworms that affect foals up to six months of age

_____ 5. Intestinal worms that lay eggs in the small intestine; divided into large and small; large worms migrate to various organs and tissues and do extensive damage

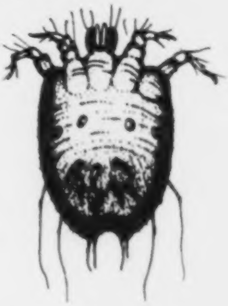
_____ 6. Parasites of the colon; eggs laid by the female on the skin surrounding the anus cause intense itching and result in tail rubbing and loss of hair

_____ 7. Intestinal round worms; largest parasite of the horse; can achieve a length of 25 cm or greater

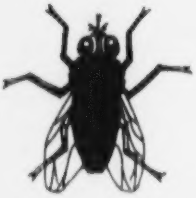
May be photocopied for student use.

OBJECTIVE 4

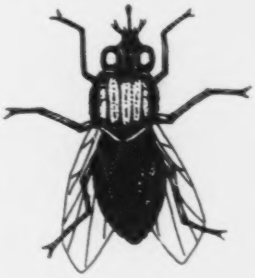
Identify external parasites. Write the correct name under each parasite.



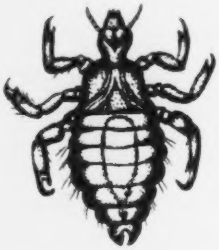
1. ______________



2. ______________



3. ______________



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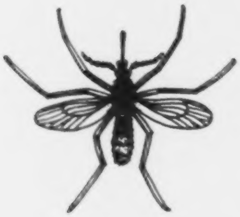
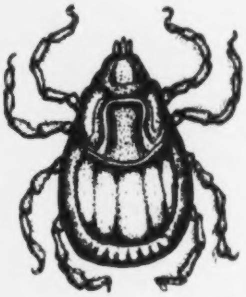
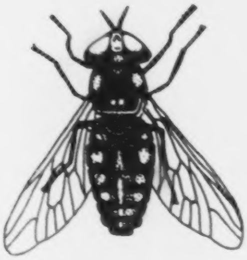


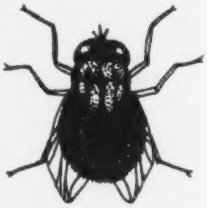
5. ______________



6. ______________



7. ______________



8. ______________

May be photocopied for student use.

OBJECTIVE 5 **Complete a chart on common external parasites.** Write in the blank spaces on the chart.

PARASITE	PROBLEMS	BREEDING AREAS	CONTROL
House fly (non-biting)	Carries infectious diseases and stomach worms; feeds on secretions from facial areas	1. ____________ ____________ ____________	Insecticides, fly baits; sanitation
Face fly (non-biting)	Feeds on secretions from facial areas or wounds; transmits eyeworms	Cow manure	2. ____________ ____________
Stable fly (biting)	Carries infectious diseases and stomach worms; bites	3. ____________ ____________	Insecticide sprays; sanitation
4. __________	Transmits equine infectious anemia; bites severely	Moist, decaying matter near standing water	Insecticides; difficult to control
Horn fly	5. ______________ ______________	Cow manure	Insecticide; separate horses from cattle
6. __________	Lay eggs on hair leading to stomach bots	Eggs deposited on hair; larvae pupate in manure	Oral anthelmintics
Lice	Itching, hair loss, scabs and sores on skin; suck blood or feed on skin debris	7. ____________ ____________	Insecticides, Ivermectin; washing of tack items
Mites	8. ______________ ______________	On animal	Quarantine of affected horses; insecticide; ivermectin
9. __________	Carry diseases; heavy infestations lead to weakness and anemia, bite	Protected areas; on animal	Removal; insecticide, Ivermectin
Mosquitoes	Transmits equine encephalitides	10. ____________ ____________	Insecticides; eliminating standing water
11. __________	Irritation, scabs and blisters, hair loss; blood loss	Varies widely (control of breeding areas is impractical)	Insecticides; stabling

May be photocopied for student use.

OBJECTIVE 6

Describe the steps in life cycles of internal parasites. Write a brief description of the life cycles in the blanks provided.

BOTS

____

____

____

____

____

____

____

____

____

____

STRONGLYES

____

____

____

____

____

____

____

____

May be photocopied for student use.

ASCARIDS

PINWORMS

STRONGYLOIDES

May be photocopied for student use.

TAPEWORMS

HABRONEMA

OBJECTIVE 7

Select from a list families of drugs effective against internal and external parasites. Place an "X" before correct responses.

_____ 1. Avermectins

_____ 2. Benzimidazoles

_____ 3. Penicillin

_____ 4. Organophosphates

_____ 5. Liniments

_____ 6. Phenothiazine-piperazines

_____ 7. Carbamates

_____ 8. Additives

May be photocopied for student use.

OBJECTIVE 8

List guidelines for the use of anthelmintics. Write the guidelines in the blanks provided.

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________
6. ______________________________
7. ______________________________
8. ______________________________
9. ______________________________

OBJECTIVE 9

Describe safety procedures when using insecticides and anthelmintics. Describe safety procedures in the blanks provided.

____

____

____

____

____

____

____

____

OBJECTIVE 10

Evaluated on Assignment Sheet 1.

May be photocopied for student use.

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OBJECTIVE 11

List management practices used in the prevention of parasitism. Write the practices in the blanks provided.

1. ____________________
2. ____________________
3. ____________________
4. ____________________
5. ____________________
6. ____________________
7. ____________________
8. ____________________
9. ____________________
10. ____________________
11. ____________________

OBJECTIVE 12

Evaluated on Assignment Sheet 2.

May be photocopied for student use.

PARASITES

All horse owners and caretakers are aware that parasites are a common problem for horses. Parasites can be a problem almost any time of the year but tend to be worse when the weather warms up. Preventive measures for parasites are not a one-time treatment but rather an on-going process. Parasites can be internal or external. External parasites live on or feed from the host animal. Internal parasites live a portion of their life cycle inside the host animal. Both internal and external parasites can cause health problems for horses.

There are over 100 types of internal parasites; however, relatively few of the internal parasites cause serious health problems for the horse. But the internal parasites that can cause damage can cause serious health problems and even lead to death for horses. Internal parasites can cause severe loss of condition; decreased growth; anemia; injury to body organs; colic and digestive problems; and inhibit the horse from reaching its performance potential. Some of the internal parasites that are most harmful to horses are strongyles (bloodworms), ascarids (roundworms), bots and pinworms. Other internal parasites can also be very damaging to horses. Internal parasites can live in almost every tissue and body cavity but most parasites live in the digestive tract, lungs, bloodstream, or body cavity. In addition, internal parasites may migrate throughout the horse's body, causing damage. Most internal parasites are host-specific meaning that equine parasites can only exist in horses, cattle parasites in cattle, and so on. If a cow ingests the egg or larvae of an equine parasite, the life cycle of the parasite is broken.

External parasites can be very damaging to a horse's health. External parasites are also bothersome and irritating to horses. External parasites can cause a horse to become weak from their blood-sucking and can result in sores. External parasites are also carriers of equine diseases. Some of the common external parasites that bother horses are ticks, flies, lice, mosquitos, and gnats.

Fortunately for both horses and horse owners, proper management practices and effective treatments can greatly reduce the damaging effects of both internal and external parasites. Deworming treatments are effective against many internal parasites. Insecticides and proper sanitation can help control external parasites. Horse owners and caretakers must be knowledgeable and take proper precautions before using dewormers or insecticides. A veterinarian should be consulted regarding a deworming schedule and the best way to control internal and external parasites for a specific area.

May be photocopied for student use.

LAP
SHEET

FUNDAMENTALS OF FOOT CARE

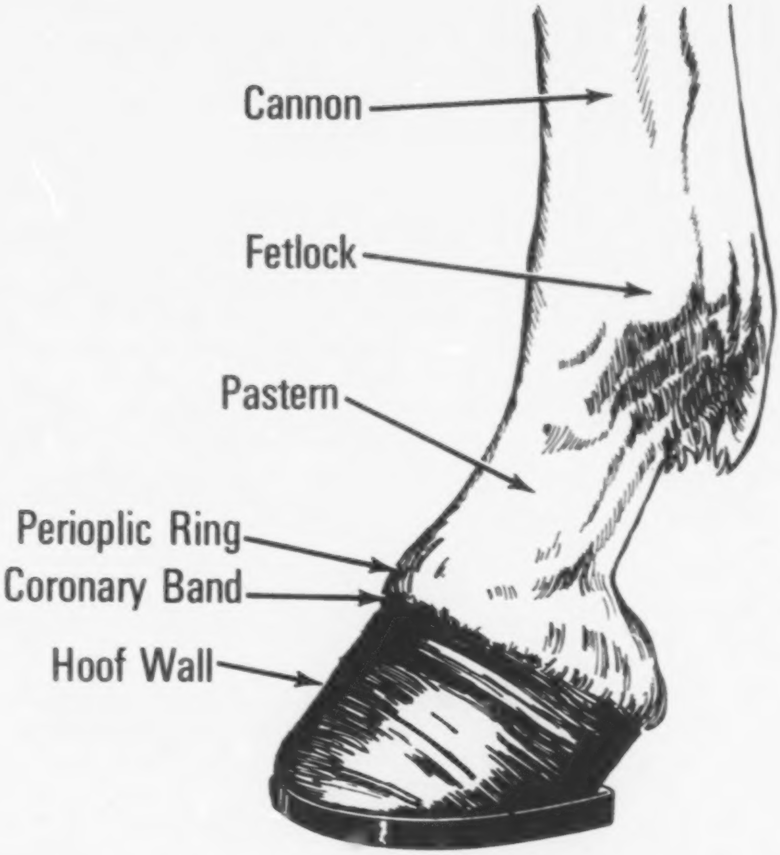
B4

Check the blank as you complete each step.

1. Take ___ the pretest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.
2. Read ___ the introduction, unit objective, and specific objectives.
3. Do ___ the focus assignments.
4. Stop ___ and have your instructor evaluate your work from the focus assignment. After your work has been evaluated, follow your instructor's recommendations.
5. Study ___ the Information Sheet, objectives 1-6.
6. Ask ___ your instructor to demonstrate the guidelines and procedures in the Job Sheet. Use the Job Sheet to follow along. Pay careful attention to any guidelines, cautions, and warnings.
7. Practice ___ the procedures demonstrated by your instructor. Use the Job Sheet as a guide. Notify your instructor when you are ready to perform the procedures for evaluation.
8. Stop ___ and have your instructor evaluate your work from the Job Sheet. After your work has been evaluated, follow your instructor's recommendations.
9. Take ___ the posttest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.

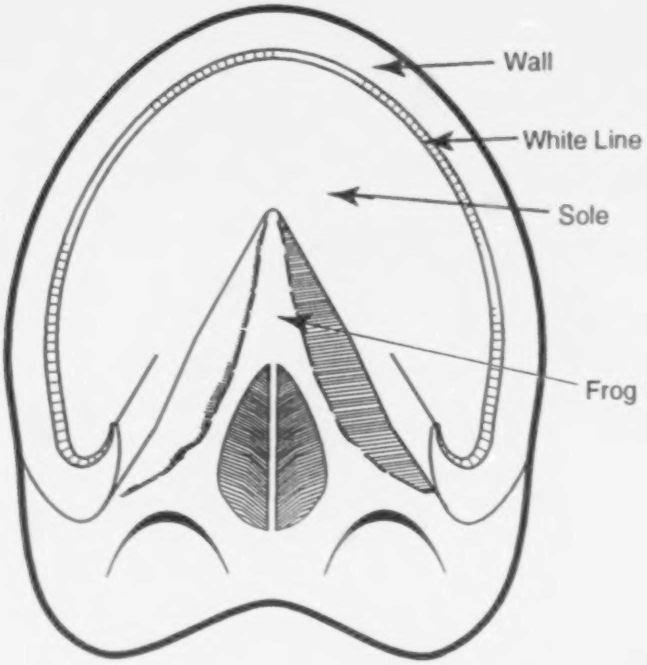
May be photocopied for student use.

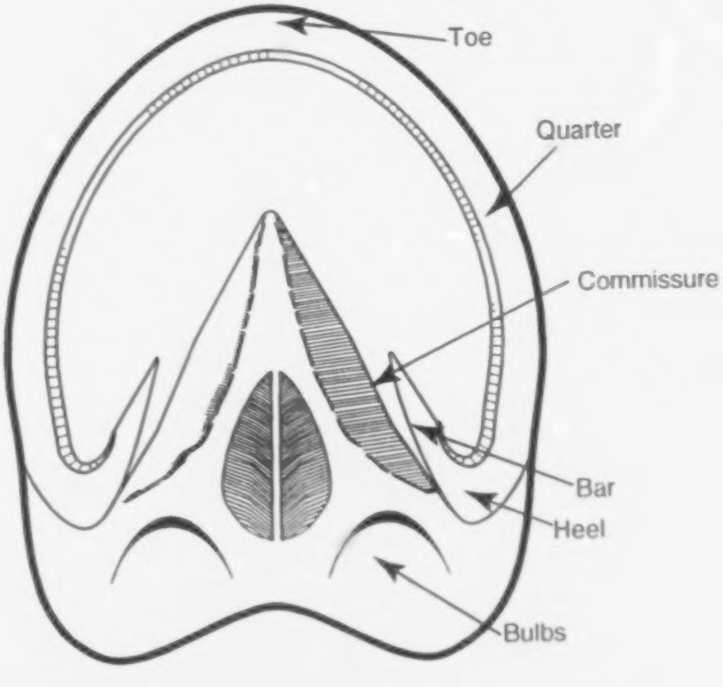
SIDE VIEW


Cannon
Fetlock
Pastern
Perioplic Ring
Coronary Band
Hoof Wall

May be photocopied for student use.

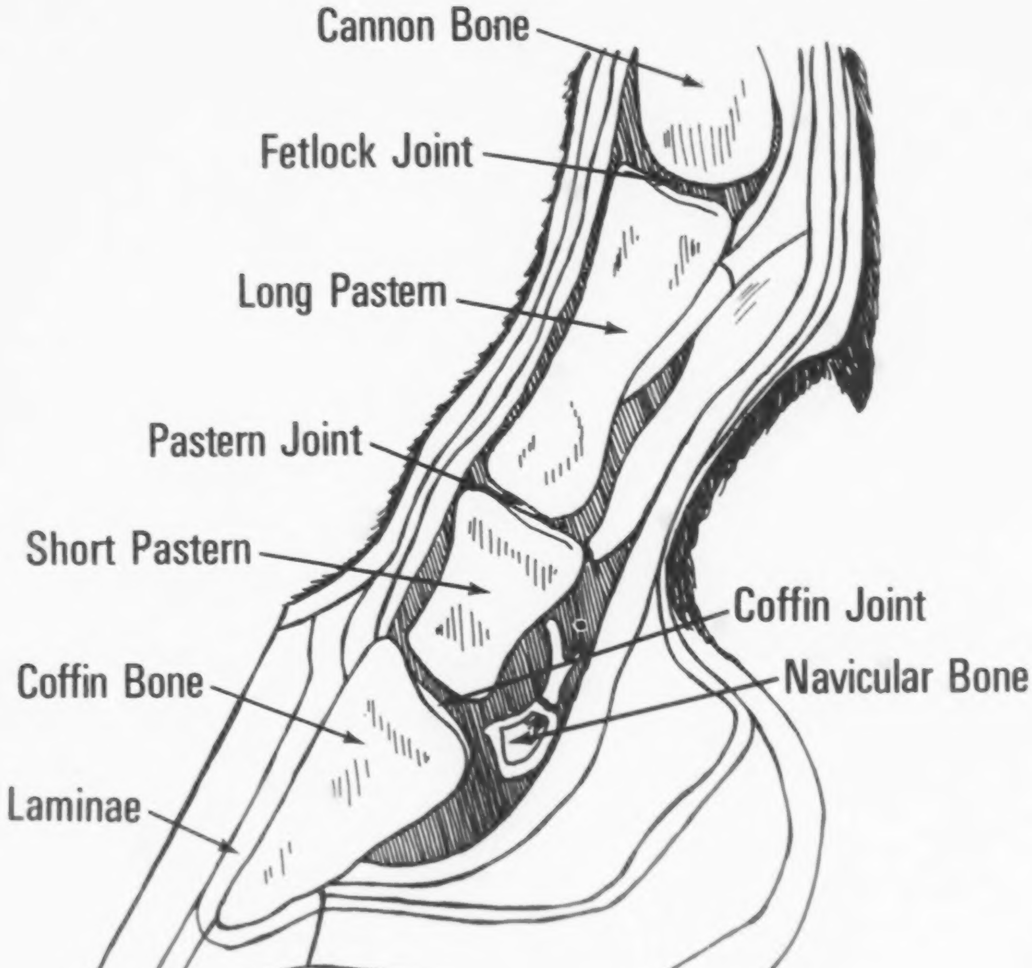
BOTTOM VIEW


Wall
White Line
Sole
Frog


Toe
Quarter
Commissure
Bar
Heel
Bulbs

May be photocopied for student use.

INTERNAL PARTS OF THE FOOT AND LOWER LEG


Cannon Bone
Fetlock Joint
Long Pastern
Pastern Joint
Short Pastern
Coffin Joint
Coffin Bone
Navicular Bone
Laminae

May be photocopied for student use.

WRITTEN TEST

FUNDAMENTALS OF FOOT CARE

B4

Name ______________________________ Score __________

OBJECTIVE 1

Match external parts of the foot and lower leg to their definitions. Write the correct letter in the blank.

A. fetlock
B. heel
C. cannon
D. hoof wall
E. quarter
F. sole
G. pastern
H. gray line
I. toe
J. bulbs
K. frog
L. perioplic ring
M. coffin bone
N. commissures
O. outer wall
P. ankle
Q. coronary band
R. laminae
S. bars
T. white line

____ 1. Area between the knee and the fetlock

____ 2. Tough, horny outer shell which protects the sensitive area and supports weight

____ 3. Rear portion of the foot that makes contact with the ground first when the horse is in motion

____ 4. Area that connects the pastern and the cannon

____ 5. Front of the hoof; leaves the ground last as the horse is in motion

____ 6. Deep grooves on both sides of the frog

____ 7. Area between the hoof and the fetlock

____ 8. Narrow strand of flesh which lies just above the coronary band

May be photocopied for student use.

_____ 9. Thinnest portion of the wall halfway around the side of the hoof

_____ 10. Thick section of tough flesh at the top of the hoof where the skin and hide join with the hoof wall

_____ 11. Rounded edges at the rear of the hoof that are located at the termination point of the coronary band

_____ 12. Wedge-shaped soft horn structure in the center of the underside of the foot

_____ 13. The area of the hoof where the sensitive and insensitive laminae mesh together

_____ 14. Undersurface of the hoof located just inside the wall beyond the separation of the white line

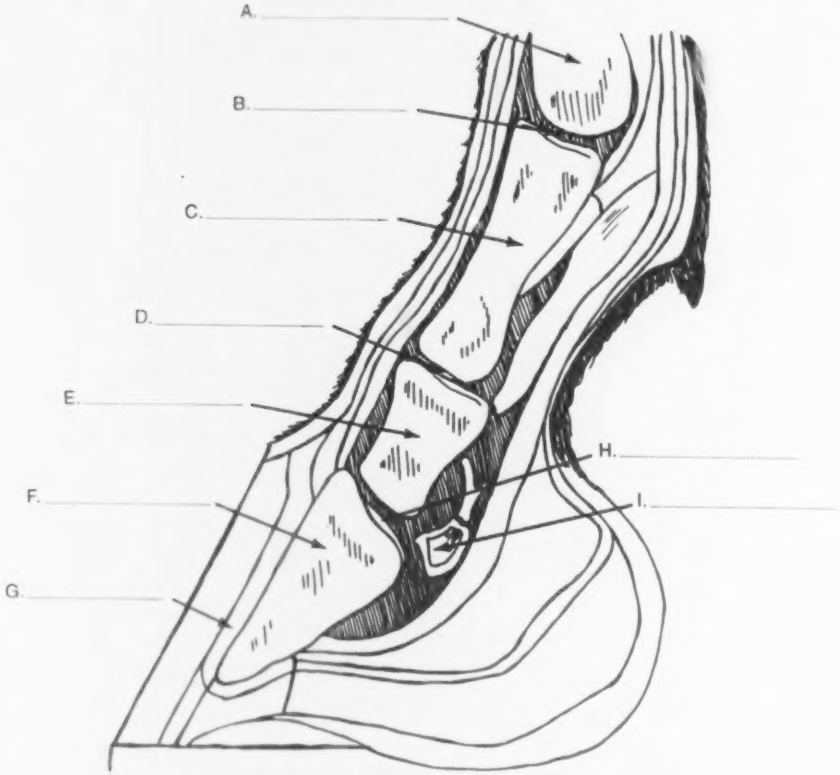
_____ 15. Continuation of the bearing edge of the wall; located on either side of the commissures

May be photocopied for student use.

OBJECTIVE 2

Label internal parts of the foot and lower leg. Write the correct name in the blank.

Cannon Bone
Fetlock Joint
Long Pastern
Pastern Joint
Short Pastern
Coffin Bone
Laminae
Coffin Joint
Navicular Bone



May be photocopied for student use.

OBJECTIVE 3

Match parts of the foot and lower leg to their specific relationships and/or functions. Write the correct letter in the blank.

A. bars
B. hoof joint
C. sole
D. hoof wall
E. pad
F. white line
G. bulbs
H. frog
I. corium
J. gray line
K. digital cushion
L. outer ring
M. commissures
N. coffin bone
O. inside wall
P. short pastern bone
Q. coronary band
R. perioplic ring
S. navicular bone

_____ 1. Cushions internal parts and aids in traction and blood circulation

_____ 2. Largest bone in the foot; is porous with many perforations for arteries, veins, and nerves to pass through and nourish the structures below

_____ 3. Layer of soft horn which appears at the bottom of the foot between the wall and sole

_____ 4. Help support the foot and keep it open at the heels

_____ 5. Give elasticity

_____ 6. Outer covering that encloses and protects the sensitive parts

_____ 7. Half of the bone is in the foot and the other half is above the foot

_____ 8. Flaky horn which covers the bottom of the hoof and is concave at the ground surface

_____ 9. Produces periople, the varnish-like substance that covers the outer surface of the wall and seals it from excessive drying

_____ 10. Main area of growth and nutrition for the hoof; located at the hair line immediately above the hoof

May be photocopied for student use.

____ 11. Positioned at the back of the coffin joint; serves as a pulley for the deep digital flexor tendon

____ 12. Absorbs concussion or jar when the foot strikes the ground

____ 13. Modified vascular tissue that furnishes nutrition to the hoof

OBJECTIVE 4

Select from a list the critical factors in the care of a foot. Place an "X" in front of the critical factors.

____ 1. Conformation

____ 2. Vitamin supplements

____ 3. Trimming

____ 4. Daily inspection

____ 5. Rest

____ 6. Shoeing

____ 7. Weather

____ 8. Hoof wear

____ 9. Cleaning the hoof

____ 10. Correct moisture content

OBJECTIVE 5

List means of maintaining sufficient moisture in the hoof. Write the means in the blanks provided.

1. ____________________

2. ____________________

3. ____________________

May be photocopied for student use.

OBJECTIVE 6

Select from a list the most common causes of lameness. Place an "X" in front of the most common causes of lameness.

_____ 1. Lack of moisture in the hoof

_____ 2. Poor hoof care

_____ 3. Daily riding

_____ 4. Disease of the foot

_____ 5. Trimming too often

_____ 6. Conformation

_____ 7. Injury

_____ 8. Lack of exercise

_____ 9. Improper shoeing

_____ 10. Foreign object in the hoof

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NO FEET, NO HORSE

Without healthy feet any horse can easily lose its ability to perform. In the wild, the rough terrain naturally wore down the horse's hoofs. Many horses today are kept in a stable or small pasture. Materials such as sand and build-up of urine and manure can draw moisture out of the hoof and cause excessive drying. Dry ground can also lead to excessive drying and cracking. Both of these can result in hoof infections such as thrush or canker.

Knowing the anatomy and physiology of the horse's foot and proper care can help the horse owner or caretaker ensure healthy feet and a horse that is able to perform. A well-balanced diet is necessary for the proper growth and a healthy appearance of the hoof. Cleaning and trimming are also important aspects of proper foot care.

The structures of the foot work together so that if one part of the foot is injured the entire foot will not function properly. Working together, the structures of the foot absorb concussion when the foot strikes the ground. This concussion can be greater for horses who are used for events such as racing or cutting where a great deal of stress can be put on the horses legs and feet. A minor injury can quickly became a problem if it is not tended to by the owner or caretaker.

No matter what the horse is used for, healthy feet are essential for the performance of the horse. Horse owners and caretakers may often overlook the care of the feet, which can lead to problems that may have been avoided in the first place. Always take the time to properly care for the horse's feet. For example, a rock lodged in the sole may be easy to dislodge and remove but if left in the sole for several days may cause sole bruising and lameness. Imagine walking with a rock in your shoe for several days! Never take the horse's feet for granted, without healthy feet, even the most athletic horse cannot perform to its ability.

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LAP SHEET

COMMON LEG AND FOOT PROBLEMS, TRIMMING AND SHOEING

B5

Check the blank as you complete each step.

1. **Take** ___ the pretest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.
2. **Read** ___ the introduction, unit objective, and specific objectives.
3. **Do** ___ the focus assignments.
4. **Stop** ___ and have your instructor evaluate your work from the focus assignment. After your work has been evaluated, follow your instructor's recommendations.
5. **Study** ___ the Information Sheet, objectives 1-7.
6. **Do** ___ the Assignment Sheet.
7. **Stop** ___ and have your instructor evaluate your work from the Assignment Sheet. After your work has been evaluated, follow your instructor's recommendations.
8. **Study** ___ the Information Sheet, objectives 9-14.
9. **Ask** ___ your instructor to demonstrate the guidelines and procedures in Job Sheet 1. Use the Job Sheet to follow along. Pay careful attention to any guidelines, cautions, and warnings.
10. **Practice** ___ the procedures demonstrated by your instructor. Use the Job Sheet as a guide. Notify your instructor when you are ready to perform the procedures for evaluation.
11. **Stop** ___ and have your instructor evaluate your work from the Job Sheet. After your work has been evaluated, follow your instructor's recommendations.

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12. **Ask** ___ your instructor to demonstrate the guidelines and procedures in Job Sheet 2. Use the Job Sheet to follow along. Pay careful attention to any guidelines, cautions, and warnings.

13. **Practice** ___ the procedures demonstrated by your instructor. Use the Job Sheet as a guide. Notify your instructor when you are ready to perform the procedures for evaluation.

14. **Stop** ___ and have your instructor evaluate your work from the Job Sheet. After your work has been evaluated, follow your instructor's recommendations.

15. **Take** ___ the posttest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.

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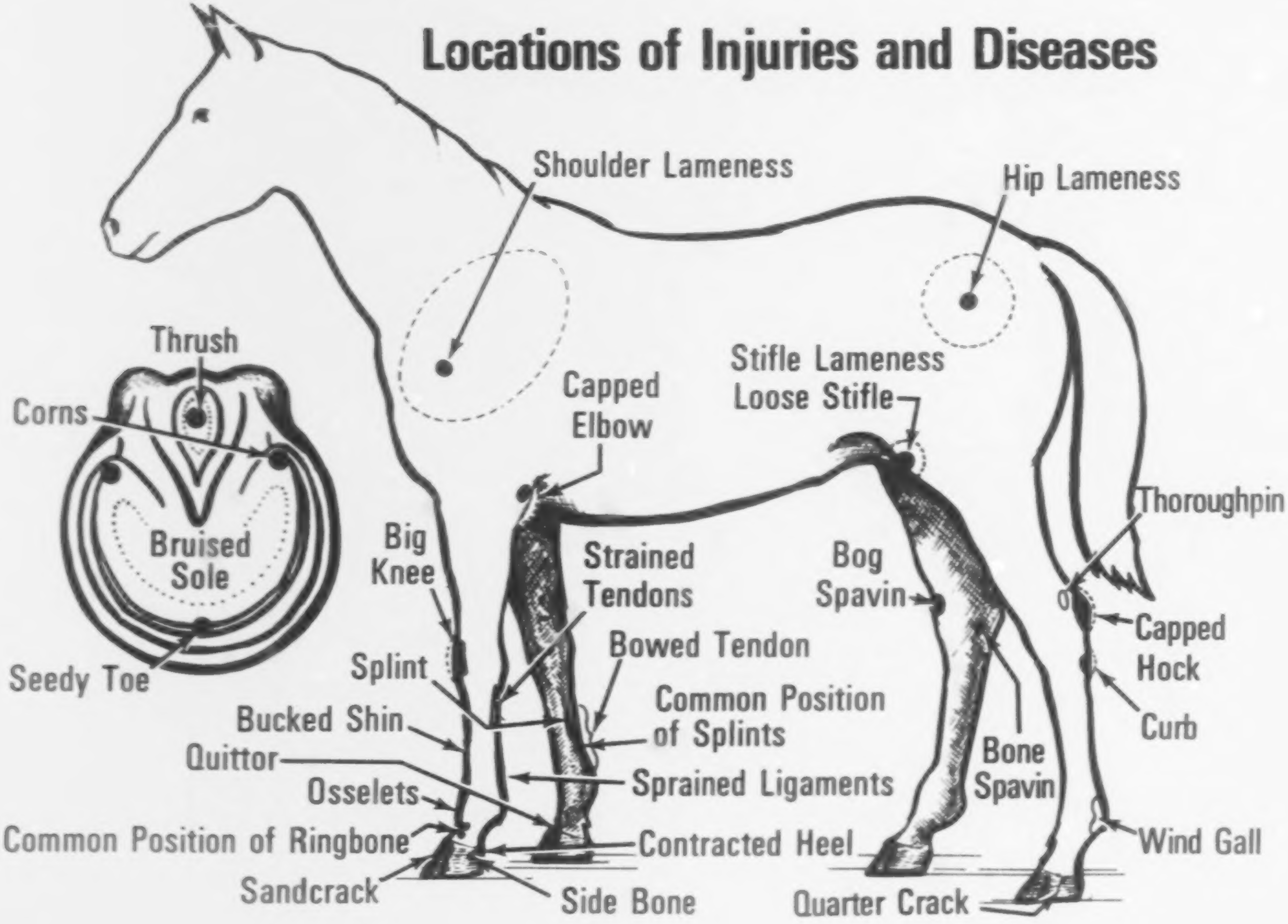
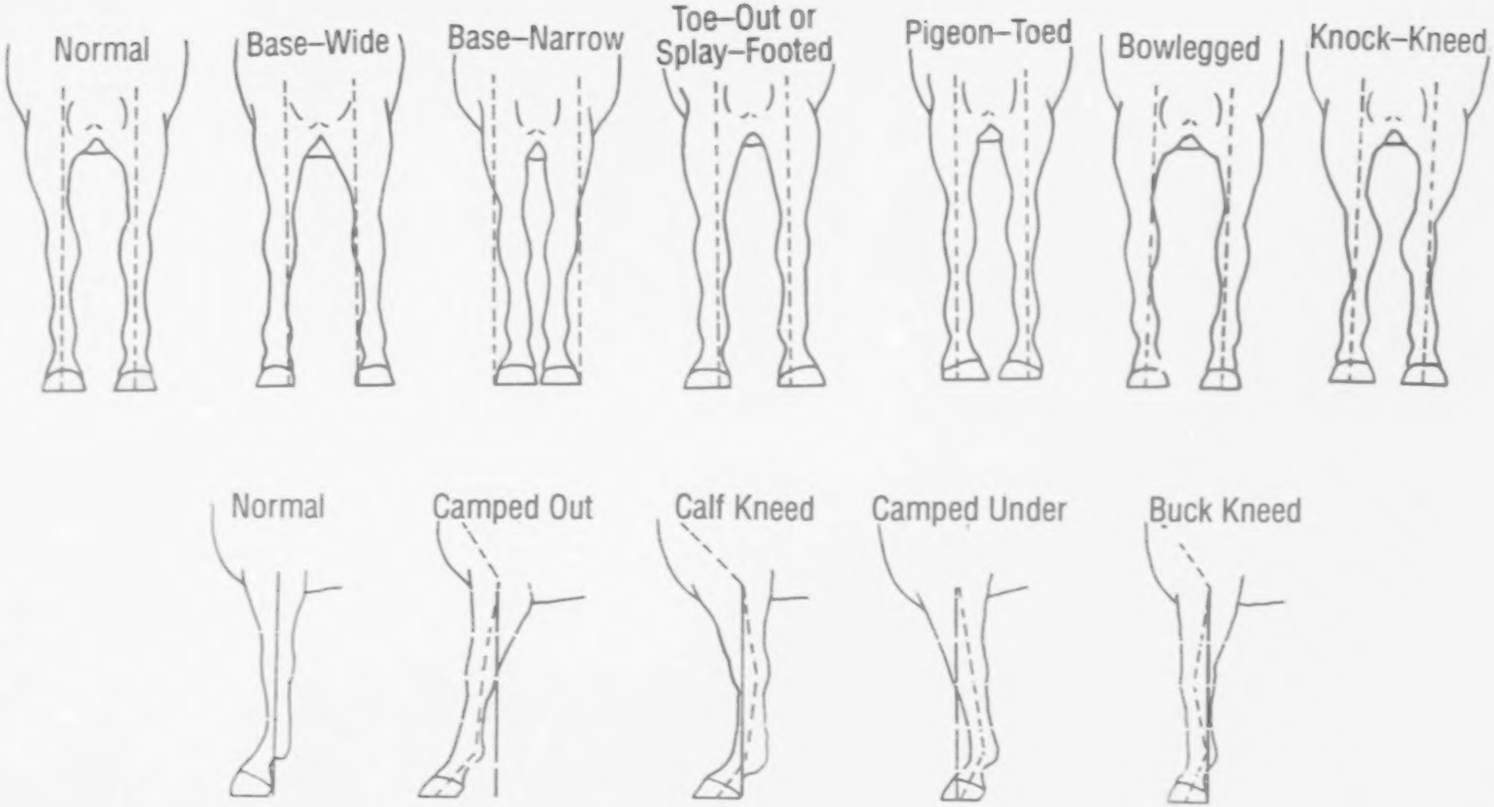
Locations of Injuries and Diseases


Shoulder Lameness
Hip Lameness
Thrush
Corns
Bruised Sole
Seedy Toe
Capped Elbow
Stifle Lameness
Loose Stifle
Thoroughpin
Big Knee
Strained Tendons
Bog Spavin
Capped Hock
Splint
Bowed Tendon
Curb
Bucked Shin
Common Position of Splints
Quittor
Bone Spavin
Osselets
Sprained Ligaments
Common Position of Ringbone
Contracted Heel
Wind Gall
Sandcrack
Side Bone
Quarter Crack

May be photocopied for student use.

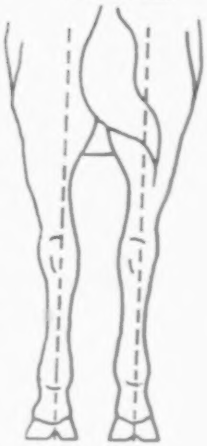
Conformation Faults of Front Legs


Normal
Base–Wide
Base–Narrow
Toe–Out or Splay–Footed
Pigeon–Toed
Bowlegged
Knock–Kneed
Normal
Camped Out
Calf Kneed
Camped Under
Buck Kneed

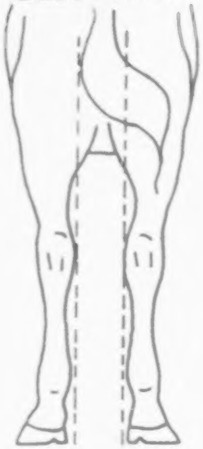
May be photocopied for student use.

Conformation Faults of Hind Legs

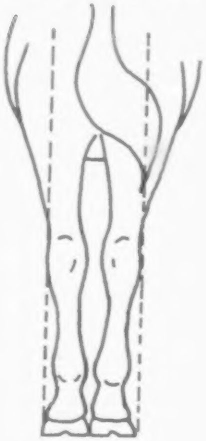
Normal



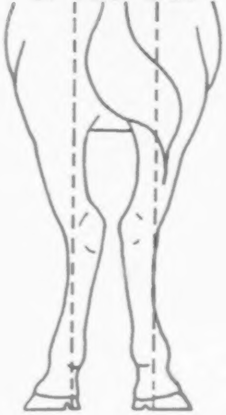
Base–Wide



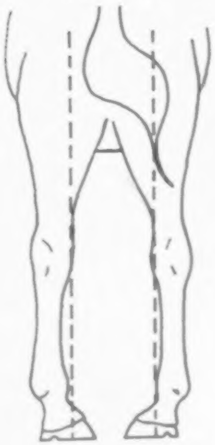
Base–Narrow



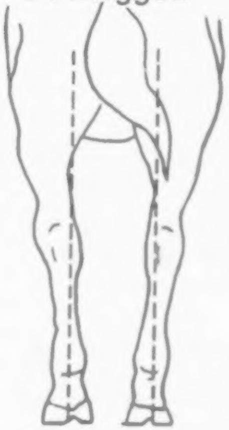
Cow–Hocked or Toe–Out



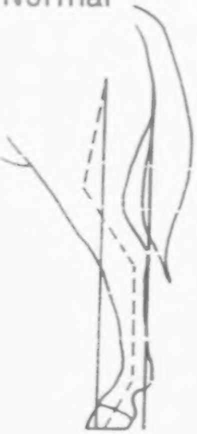
Toe–In



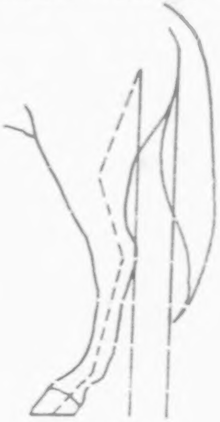
Bowlegged



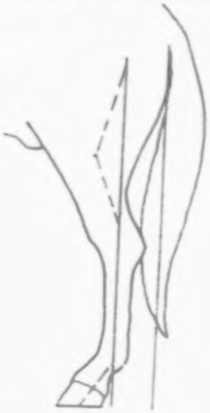
Normal



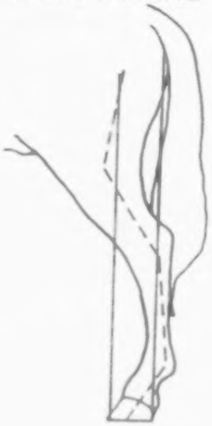
Sickle–Hocked



Straight Hocks



Hocks Behind



May be photocopied for student use

WRITTEN TEST

COMMON LEG AND FOOT PROBLEMS, TRIMMING AND SHOEING

B5

Name ______________________ Score __________

OBJECTIVE 1

List general situations relating to unsoundness. Write the situations in the blanks provided.

1. ______________________
2. ______________________
3. ______________________
4. ______________________
5. ______________________
6. ______________________

475

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OBJECTIVE 2

Match major diseases and injuries causing unsoundness to their definitions. Place the correct letter in the blanks.

A. ringbone
B. osselets
C. bone spavin
D. sprains
E. bowed tendons
F. thoroughpin
G. bog spavin
H. stringhalt
I. gonitis
J. splints
K. curb
L. capped knee
M. navicular bone disease
N. capped hock
O. sesamoiditis
P. bucked shins
Q. simple fracture
R. compound fracture
S. sprained knee
T. multiple fracture
U. capped elbow
V. cuts
W. lacerated or ruptured tendons

_____ 1. Caused by over stretching resulting in a slight tear

_____ 2. Caused by deep cuts through the skin and underlying tissue or sudden overextension

_____ 3. Condition in which the deep flexor tendons and the superficial flexor tendons become bowed, either separately or at the same time

_____ 4. Type of tenosynovitis involving the deep digital flexor tendon of the hindlimb

_____ 5. Type of tenosynovitis involving swelling of the joint capsule of the hock joint

_____ 6. A condition which results in a sudden upward jerking of the hind leg and an involuntary flexing reaction of the hock as the horse moves forward

_____ 7. Inflammation of the paired sesamoid bones and coverings

_____ 8. Tearing or strain of the ligaments which connect the splint bones to the cannon bone

_____ 9. Inflammation of bone covering causing a painful swelling on anterior surface of cannon bone

_____ 10. A soft boggy swelling of the bursa overlying the point of the elbow

_____ 11. Soft, flabby swelling caused by an irritation at the point of the hock

May be photocopied for student use.

_____ 12. Inflammation of the bursa near the small navicular bone

_____ 13. Swelling over the front of the knee

_____ 14. Sprain of the ligaments that stabilize the knee joint; also referred to as popped knee

_____ 15. Swelling of the stifle joint accompanied by lameness

_____ 16. Swelling of the ligament at the rear of the leg and below the point of the hock

_____ 17. Describes periostitis occurring below the fetlock joint

_____ 18. Arthritis of the hock joint

_____ 19. Swelling and new bone growth of the fetlock joint

_____ 20. Bone does not break through to the skin

_____ 21. Bone makes contact with the outside; either through open wound or penetration

OBJECTIVE 3

Match major diseases and injuries of the foot to their definitions. Place the correct letter in the blanks.

A. thrush
B. sidebones
C. blisters
D. quittor
E. laminitis
F. expanded heels
G. canker
H. contracted heels
I. bruised sole
J. corns
K. sand cracks
L. gravel

_____ 1. Foreign objects such as rocks can irritate the sole

_____ 2. Foot infection caused by a puncture wound or penetrating injury to the white line

_____ 3. Chronic overgrowth of the horn of the foot

_____ 4. Foot is abnormally narrow, especially at the heels; frog may be narrow and sunken

_____ 5. Bruises of the sole laminae at the angle of the wall and bar

May be photocopied for student use.

____ 6. Condition in which the blood flow to the vessels of the horse's feet is disrupted; causes destruction of inner-hoof structures

____ 7. Bacterial infection of the frog resulting from poor or improper sanitation; characterized by odorous black moist accumulation of material

____ 8. Chronic deep seated oozing, infection of the lateral cartilages of the coffin bone

____ 9. Splits or cracks in the hoof wall

____ 10. Ossification of the lateral cartilages

OBJECTIVE 4

List common unsoundnesses that result in retiring horses. Write the unsoundnesses in the blanks provided.

1. ________________________________
2. ________________________________
3. ________________________________
4. ________________________________
5. ________________________________
6. ________________________________
7. ________________________________
8. ________________________________

May be photocopied for student use.

OBJECTIVE 5

Describe diagnostic procedures for detecting lameness.
Describe the procedures in the blanks provided.

Visual Examination

Examination by palpation

Hoof tester

X-rays

May be photocopied for student use.

OBJECTIVE 6

Select from a list causes of lameness in which symptoms decrease with use. Place an "X" in front of correct responses.

_____ 1. Sprains of ligaments

_____ 2. Azotoria

_____ 3. Arthritic joint

_____ 4. Bone spavin

_____ 5. Simple breaks

_____ 6. Ringbone

_____ 7. Strains of muscle structures or tendons

_____ 8. Navicular

_____ 9. Fractures

_____ 10. Stringhalt

OBJECTIVE 7

Match the suspected areas of lameness to the correct indications.

A. Right hind foot
B. Hip
C. Feet
D. Left hind foot
E. Shoulder or stifle
F. Knee
G. Right front foot
H. Left front foot

_____ 1. Lameness on hard ground

_____ 2. Nods or drops head when left front foot makes contact with the ground

_____ 3. Nods or drops head when right front foot makes contact with the ground

_____ 4. Lameness on soft ground

_____ 5. Nods or drops head when left hind foot makes contact with the ground; simultaneously raises left hip when left hind foot makes contact with the ground

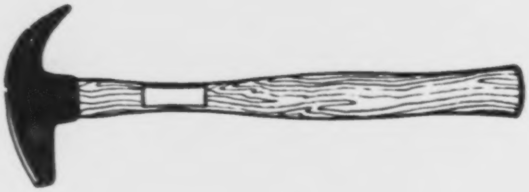
_____ 6. Nods or drops head when right hind foot makes contact with the ground; simultaneously raises right hip when right hind foot makes contact with the ground

OBJECTIVE 8

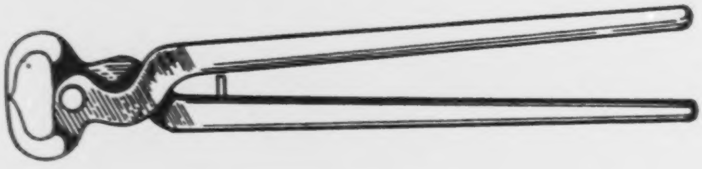
Evaluated on the Assignment Sheet.

OBJECTIVE 9

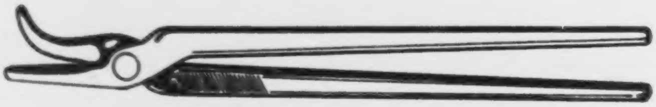
Label basic farrier tools. Write the name of the tool in the blank provided.



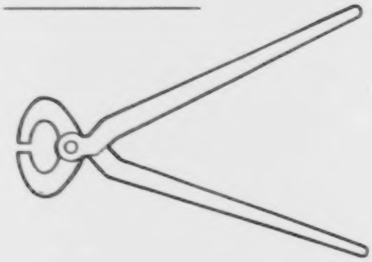
1. ____________



2. ____________



3. ____________



4. ____________

5. ____________

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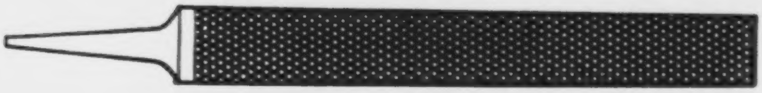
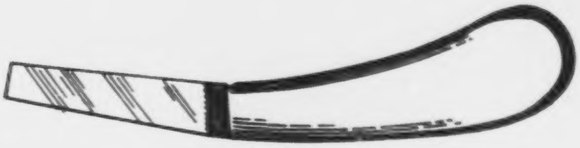
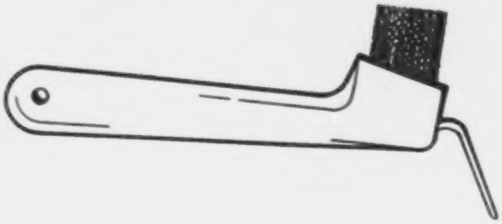


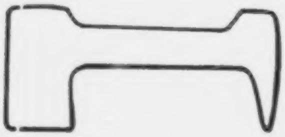
6. ______________



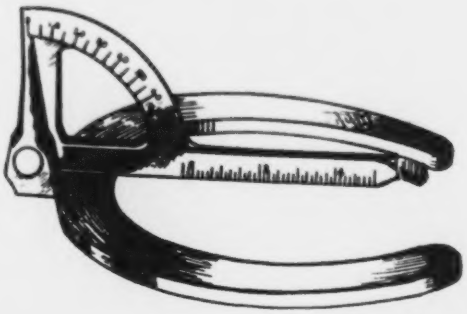
7. ______________



8. ______________



9. ______________



10. ______________

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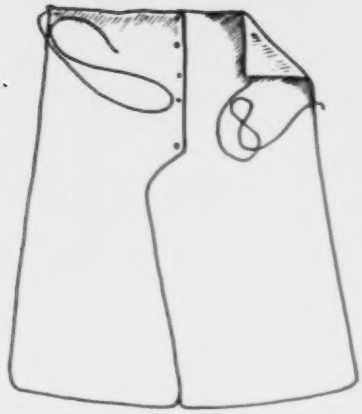
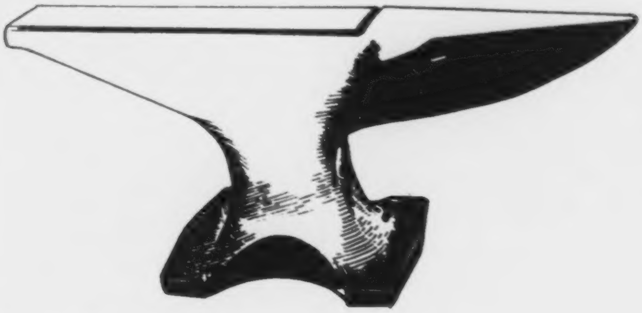
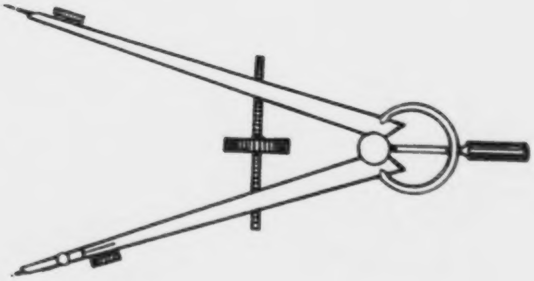


11. ______________



12. ______________



13. ______________

483

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OBJECTIVE 10

Select from a list considerations when preparing the hoof for trimming and/or shoeing. Place an "X" in front of correct responses.

_____ 1. Evaluate the horse after it has been shod.

_____ 2. At rest, examine the wear pattern of the shoe, the shape of the foot, and the hoof angle

_____ 3. Remove other animals, such as dogs, from the shoeing area.

_____ 4. Shoe horse before any evaluation.

_____ 5. Select and shape the appropriate shoe for the particular horse.

_____ 6. Turn rasp on the side, and dress the foot before shoeing.

_____ 7. Select the most inexpensive shoe for the horse.

_____ 8. Remove old shoes, if shod.

_____ 9. Move the horse to the shoeing area; shoeing area should have good lighting and a flat surface.

_____ 10. Using a sole knife trim away old, irregular dead frog, and check for stones, debris, and thrush concealed in overgrown frog.

_____ 11. Remove excess hoof wall with nippers.

_____ 12. Remove old flaking sole to check for damage to sole area.

_____ 13. Move horse to uneven surface for shoeing.

_____ 14. Use rasp to make final adjustments.

_____ 15. Allow foot to drop freely for analysis.

May be photocopied for student use.

OBJECTIVE 11

List common faults in preparation of the hoof. Write the faults in the blanks provided.

1. ______________________________

2. ______________________________

3. ______________________________

4. ______________________________

5. ______________________________

May be photocopied for student use.

OBJECTIVE 12

Complete a chart on conformation defects of forelegs.

Complete the chart given below.

Defect	Cause	Effect on Gait	Area under strain	Remarks	Horseshoer's Correction
1. ________	Leg	Wings in, may interfere	Inside of fetlock and pastern	Often splay-footed; feet are outside perpendicular line drawn from center of each side of chest; inside of hoof shows wear	Lower outside wall, square toe, and put lateral extensions on inside
Base-narrow	Leg	Paddles	2. ________ ________ ________	Often pigeon-toed; feet are inside perpendicular lines drawn from center of each limb at chest; outside of hoof shows wear	Lower inside wall, square toe, and put lateral extension on outside
Pigeon-toed	Whole leg or from fetlock down	Paddles	3. ________ ________	Correct trimming of colts will prevent worsening of defect; hoof wears on inside	Lower inside wall, watch for contraction, sidebones, and corns on outside heel; square toe and put lateral extension on outside
4. ________ ________	Cannon bone angles forward from knee down	Interference	Inside pastern	Horse seldom remains sound under heavy work	Lower outside wall; watch for contraction, sidebones, and corns on inside heel; square toe and put lateral extension on inside
Calf-knees	Cannon bone angles back from knee down		Whole knee area	Often present at birth but disappears within six months or less	5. ____________________
Bucked-knees	Congenital or nutritional		6. ________ ________	See veterinarian	None
7. ________	Congenital or nutritional		Mostly inside knees	See veterinarian	None
Bowlegs			Mostly inside knees		8. ____________________

May be photocopied for student use.

OBJECTIVE 13

Complete a chart on conformation defects of hind legs.

Complete the chart given below.

Defect	Cause	Effect on Gait	Area under strain	Remarks	Horseshoer's Correction
Base-narrow	1. ________	Wings out	Outside of bones, ligaments, and joints	Often bowlegged; legs are straight to hock and then bend forward	Lower inside wall; use lateral extension on outside of toe; use trailer on outside branch if feet toe-in
2. ________ ________	Legs	Wings in, may interfere	Inside of bones, ligaments, and joints	Most common form is cow-hocked	Lower outside wall; use lateral extension on inside, but bevel in underneath so it will not cut horse if horse interferes
Cow-hocked	Legs	Wings in	3. ________ ________	Strain on hock may cause bone spavin; hind legs have tendency to go wide in a sliding stop	Lower outside wall (prevents worsening of defect in young horses); use lateral extension on inside of toe, swelled heel on inside branch
Sickle-hocked	Legs	Shortens stride	4. ________ ________	If defect is very pronounced, horse will not stand up under hard use; hock comes under great stress; makes horse subject to curb	Lower toe as much as possible; heel calk on inside branch may help if splay-footed
Straight (in back)	Legs		Front of hock	Makes horse subject to bog spavin and stifle; easily injured by heavy work; pasterns will be too straight	5. ________ ________

May be photocopied for student use.

OBJECTIVE 14 **Select from a list guidelines for effective shoeing.** Place an "X" in front of correct guidelines.

_____ 1. Treat foot for abnormalities if needed.

_____ 2. Consider the conformation of the horse when trimming.

_____ 3. Shape horse's foot to shoe.

_____ 4. Make sure the foot is level.

_____ 5. Reset at one-week intervals.

_____ 6. Nail shoe to where clinches are evenly distributed at adequate height.

_____ 7. Set the shoe fully forward to eliminate dubbing of the toe.

_____ 8. Reset at approximately six-week intervals depending on the individual animal.

_____ 9. Treat all horse's feet the same.

_____ 10. Shape the shoe to the horse's foot, not foot to shoe.

_____ 11. Cut or straighten clinches prior to attempting to remove the old shoe.

_____ 12. Make the experience as pleasing as possible for the horse to avoid trouble in the future.

OBJECTIVE 15 **Evaluated on Job Sheet 1.**

OBJECTIVE 16 **Evaluated on Job Sheet 2.**

May be photocopied for student use.

LAP
SHEET

PRACTICAL HORSE NUTRITION

C1

Check the blank as you complete each step.

1. **Take** ___ the pretest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.

2. **Read** ___ the introduction, unit objective, and specific objectives.

3. **Do** ___ the focus assignments.

4. **Stop** ___ and have your instructor evaluate your work from the Focus Assignment. After your work has been evaluated, follow your instructor's recommendations.

5. **Study** ___ the Information Sheet, objectives 1-11.

Optional: Watch ___ the video *Equine Nutrition: The Art, Science and Common Sense of Feeding Horses* and/or the video *Feeding Management for Horses.*

Optional: Read ___ Oklahoma Cooperative Extension Service Publications F-3973 *Feeding Management of the Equine*, F-3980 *Use of Forages for Horses*, F-3981 *Managing Grazing of Horses*, F-3997 *Ration Formulation for Horses*, CR-3982 *Alternatives in Grain Selections for Horse Rations*, E-910 *Mineral Needs for Horses: A Survey of Mineral Content of Oklahoma Forages and Grains*, F-3977 *Managing Young Horses for Sound Growth*, or F-2072 *Blister Beetles and Alfalfa.*

6. **Do** ___ Assignment Sheet 1.

7. **Stop** ___ and have your instructor evaluate your work from the Assignment Sheet. After your work has been evaluated, follow your instructor's recommendations.

May be photocopied for student use.

8. **Do** ___ Assignment Sheet 2.

9. **Stop** ___ and have your instructor evaluate your work from the Assignment Sheet. After your work has been evaluated, follow your instructor's recommendations.

10. **Take** ___ the posttest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.

May be photocopied for student use.

WRITTEN TEST

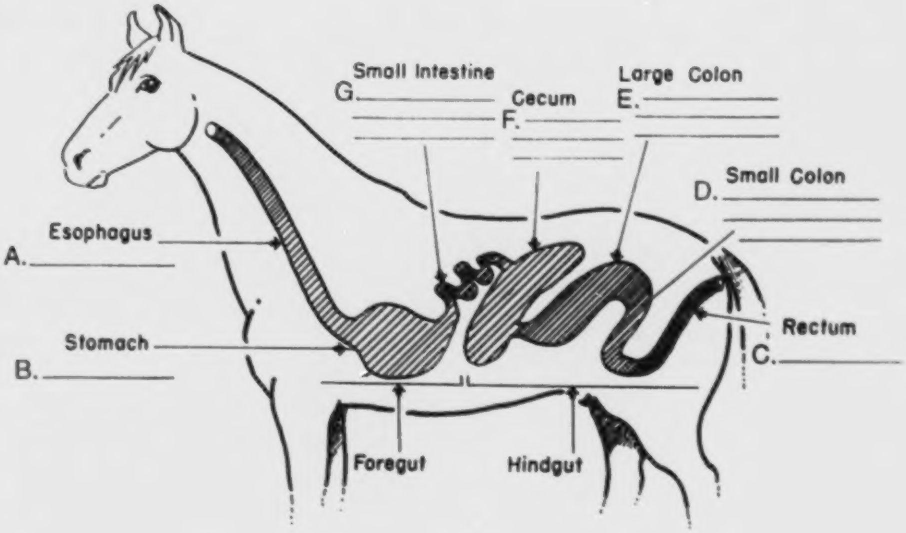
PRACTICAL HORSE NUTRITION

C1

Name ______________________________ Score __________

OBJECTIVE 1

Complete a diagram concerning the length and capacity of the components of the digestive system. Write the correct numbers in the blanks provided.


Small Intestine
G.
Cecum
F.
Large Colon
E.
Small Colon
D.
Esophagus
A.
Stomach
B.
Rectum
C.
Foregut
Hindgut

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OBJECTIVE 2

Match digestive enzymes and acids to the foods digested by each.

A. amylase
B. myasin
C. gastric lipase
D. trypsin
E. pancreatic lipase

F. amino acids
G. pepsin
H. gastric juices
I. pancreatic amylase
J. bile

_____ 1. Secreted by the liver, helps break down fat, aids in fatty acid absorption, and activates pancreatic lipase

_____ 2. An enzyme contained in the gastric juices that helps digest fat into fatty acids and glycerol

_____ 3. A minor enzyme contained in the saliva that helps digest carbohydrates

_____ 4. An enzyme contained in the gastric juices that helps digest protein into amino acids

_____ 5. Breaks starch into maltose, a simple sugar that is easy to digest

_____ 6. An enzyme contained in the pancreatic juice that converts protein into amino acids

_____ 7. An enzyme contained in the pancreatic juice that breaks down fats to glycerol and fatty acids

OBJECTIVE 3

List types of nutrients and their purpose. Write the nutrients and their purpose in the blanks provided.

1. ____

____

2. ____

____

May be photocopied for student use.

3. ____

____

4. ____

____

5. ____

____

OBJECTIVE 4

List functions of nutrients supplied by feed. Write the seven functions in the blanks provided.

1. ____
2. ____
3. ____
4. ____
5. ____
6. ____
7. ____
8. ____

May be photocopied for student use.

OBJECTIVE 5

Classify symptoms of nutritional deficiencies as protein, mineral, vitamin, or carbohydrate deficiencies. Place a "P" before protein deficiencies, a "M" before mineral deficiencies, a "V" before vitamin deficiencies, and a "C" before carbohydrate deficiencies. If the symptom could result from more than one deficiency, place all appropriate letters before the symptom.

_____ 1. Impaired vision

_____ 2. Loss of weight

_____ 3. Poor hair coat

_____ 4. Abnormal bone growth

_____ 5. Lack of energy

_____ 6. Rickets

_____ 7. Decreased growth

_____ 8. Body tissue loss

_____ 9. Poor hoof growth

_____ 10. Reduced feed intake

_____ 11. Decreased physical endurance

_____ 12. Weakening of the bones

_____ 13. Decreased milk production

_____ 14. Loss of condition

_____ 15. Increased susceptibility to infections

_____ 16. Excessive watering of the eyes

_____ 17. Digestive disturbances

_____ 18. Respiratory illness

_____ 19. Reproduction problems

_____ 20. Weakness

_____ 21. Poor growth rates

_____ 22. Unthrifty appearance

May be photocopied for student use.

OBJECTIVE 6

Select from a list factors affecting digestion. Place an "X" in front of the correct factors.

_____ 1. Frequency of feeding

_____ 2. Type of feed trough

_____ 3. Fed inside or outside

_____ 4. Individuality

_____ 5. Amount and type of work

_____ 6. Processing of feeds

_____ 7. Fed alone or with other horses nearby

_____ 8. Time of watering

_____ 9. Person feeding

_____ 10. Level of intake

OBJECTIVE 7

Distinguish between classifications of feeds. Place a "C" in front of feeds which are concentrates and an "R" in front of feeds which are roughages.

_____ 1. Milo

_____ 2. Hay

_____ 3. Corn

_____ 4. Oats

_____ 5. Pasture

_____ 6. Protein supplements

_____ 7. Barley

_____ 8. Vitamin and mineral supplements

May be photocopied for student use.

OBJECTIVE 8

Select from a list factors affecting feed intake. Place an "X" in front of correct factors.

_____ 1. Quality of feed

_____ 2. Feed trough size

_____ 3. Individuality

_____ 4. Type of work performed

_____ 5. Clip and trim of horse

_____ 6. Season of year

_____ 7. Color of horse

_____ 8. Health and temperament of horse

_____ 9. Maturity, size, and physical condition

_____ 10. Person feeding

OBJECTIVE 9

Select from a list metabolic disorders directly attributed to feeding. Place an "X" in front of correct responses.

_____ 1. Malnutrition in lactating mares

_____ 2. Colic

_____ 3. Protein deficiency

_____ 4. Tetanus

_____ 5. Nutritional myopathy/exertional myopathy

_____ 6. Laminitis

_____ 7. Abrasions

_____ 8. Stall vices

_____ 9. Choke

_____ 10. Chronic bronchitis/chronic bronchiolitis

_____ 11. Impacted stomach

_____ 12. Mineral deficiency

_____ 13. Lockjaw

_____ 14. Forage toxicities

_____ 15. Vitamin deficiency

May be photocopied for student use.

OBJECTIVE 10

Discuss factors to consider in selection of commercial feeds. Discuss factors to consider in selection of commercial feeds in the blanks provided.

OBJECTIVE 11

Discuss management practices to consider when feeding. Discuss management practices to consider when feeding in the blanks provided.

May be photocopied for student use.

OBJECTIVE 12 **Evaluated on Assignment Sheet 1.**

OBJECTIVE 13 **Evaluated on Assignment Sheet 2.**

May be photocopied for student use.

LAP
SHEET

EQUINE GENETICS

D1

Check the blank as you complete each step.

1. **Take** ___ the pretest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.
2. **Read** ___ the introduction, unit objective, and specific objectives.
3. **Do** ___ the focus assignments.
4. **Stop** ___ and have your instructor evaluate your work from the focus assignment. After your work has been evaluated, follow your instructor's recommendations.
5. **Study** ___ the Information Sheet, objectives 1-2.
6. **Do** ___ Assignment Sheet 1.
7. **Stop** ___ and have your instructor evaluate your work from the Assignment Sheet. After your work has been evaluated, follow your instructor's recommendations.
8. **Study** ___ the Information Sheet, objectives 4-5.
9. **Do** ___ Assignment Sheet 2.
10. **Stop** ___ and have your instructor evaluate your work from the Assignment Sheet. After your work has been evaluated, follow your instructor's recommendations.
11. **Do** ___ Assignment Sheet 3.
12. **Stop** ___ and have your instructor evaluate your work from the Assignment Sheet. After your work has been evaluated, follow your instructor's recommendations.
13. **Take** ___ the posttest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.

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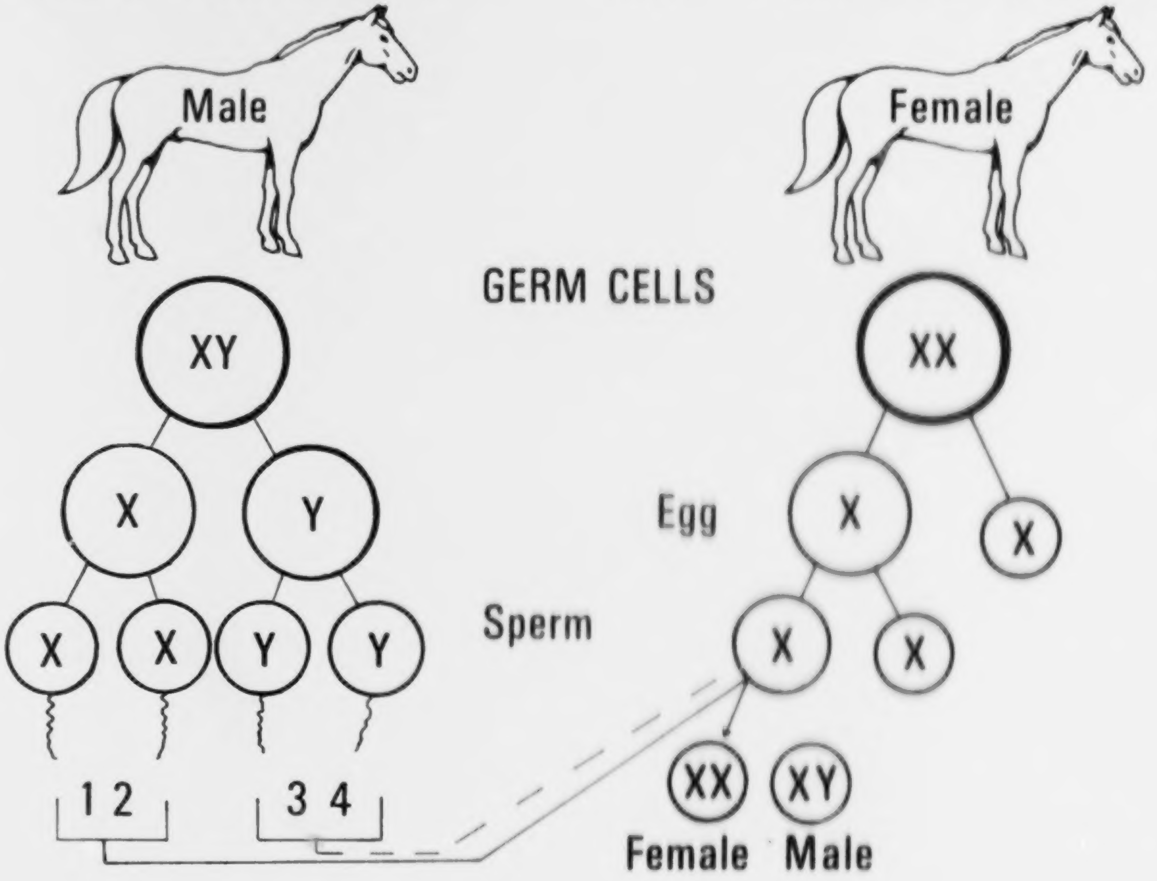
Sex Determination

XY = MALE CHROMOSOME XX = FEMALE CHROMOSOME


Male
Female
GERM CELLS
XY
XX
X
Y
Egg
X
X
Sperm
X
X
Y
Y
X
X
1 2
3 4
XX
XY
Female
Male

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INSTRUCTOR'S RESOURCE PACKAGE - Equine Management and Production
TRANSPARENCY MASTER 1 - **CIMC** - D1 - 1

EQUINE GENETICS

Name ______________________ Score __________

OBJECTIVE 1

Describe fundamentals of heredity. Describe the fundamentals of heredity in the blanks provided.

1. **chromosome** – ______________________

2. **gene** – ______________________

3. **allele** - ______________________

4. **dominant** - ______________________

504

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5. **recessive** – ____

____

6. **genotype** – ____

____

7. **phenotype** – ____

____

8. **qualitative traits** – _______________________________________

____

9. **quantitative traits** – ______________________________________

____

May be photocopied for student use.

OBJECTIVE 2

State possible results of given matings. Complete the mating results below.

1.

	B	B
b		
b		

2.

	B	B
B		
b		

3.

	B	B
B		
B		

4.

	b	b
b		
b		

5.

	b	b
B		
b		

6.

	B	b
B		
b		

May be photocopied for student use.

OBJECTIVE 3 **Evaluated on Assignment Sheet 1.**

OBJECTIVE 4 **Match breeding systems to their correct definitions.**

A. closebreeding
B. crossbreeding
C. across species mating
D. breedcrossing
E. upbreeding
F. linecrossing
G. outbreeding
H. inmating
I. species hybridization
J. inbreeding
K. outcrossing
L. linebreeding
M. intermating
N. grading

_____ 1. Mating of individuals who are more closely related than the average of the population

_____ 2. Mating of horses from different breeds

_____ 3. Outbreeding of a superior stallion to a below average mare

_____ 4. Mating of closely related animals

_____ 5. Mating of unrelated animals within the same breed

_____ 6. Crossing of members of two separate species

_____ 7. A type of outcrossing in which members from two distinct family lines are mated

_____ 8. Mating either unrelated or distantly related individuals

_____ 9. Mating of animals directed toward common, admired ancestor

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OBJECTIVE 5

Describe purposes of breeding systems. Describe the purposes of breeding systems in the blanks provided.

1. **inbreeding** – ______________________________

____

2. **closebreeding** – ______________________________

____

3. **linebreeding** – ______________________________

____

4. **outbreeding** – ______________________________

____

5. **outcrossing** – ______________________________

____

6. **linecrossing** – ______________________________

____

7. **grading** – ______________________________

____

8. **crossbreeding** – ______________________________

____

9. **species hybridization** – ______________________________

____

OBJECTIVE 6

Evaluated on Assignment Sheet 2.

OBJECTIVE 7

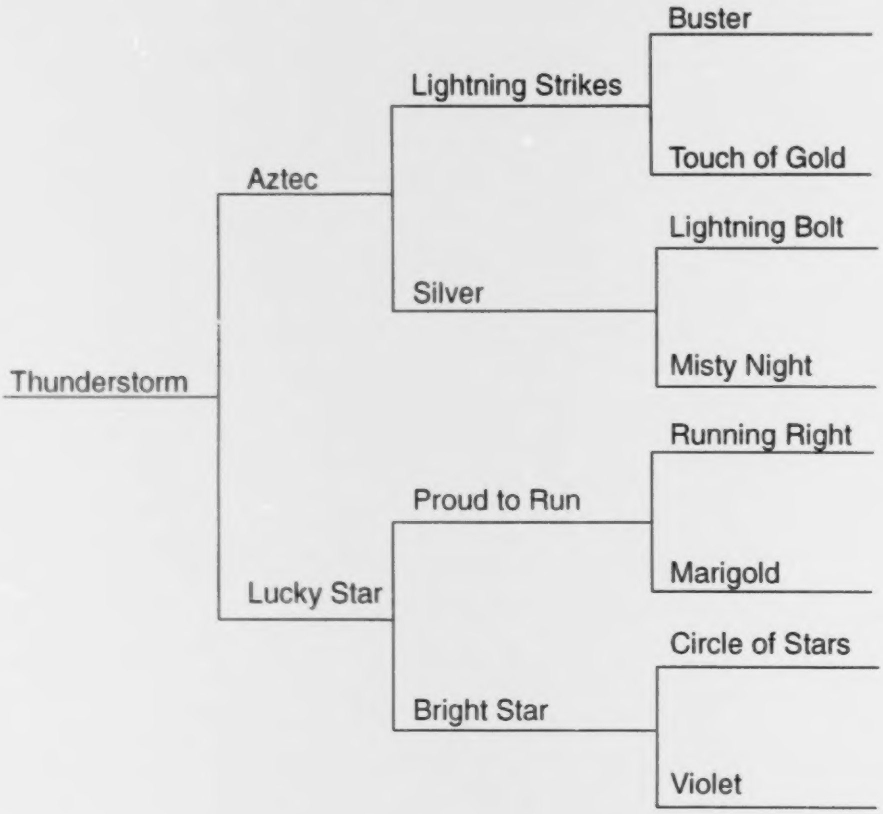
Evaluated on Assignment Sheet 3.

May be photocopied for student use.

HANDOUT 1

READING A PEDIGREE

A pedigree can help a potential horse buyer determine the ancestry and potential of a horse. To read a pedigree, start at the far left of the pedigree. The first name to appear is the name of the horse (Thunderstorm). The next names listed are the sire (Aztec) and the dam (Lucky Star). The sire and dam both contribute 50% to the genetic makeup. The sire's name is always listed above the dam's name in a pedigree. The grandsires and granddams appear next in the pedigree. They contribute 25% to the genetic makeup. The paternal grandsire (Lightning Strikes) and granddam (Silver) appear above the maternal grandsire (Proud to Run) and the maternal granddam (Bright Star). The next generation shown in the pedigree are the great-grandsires and great-granddams. They contribute 12.5% to the genetic makeup. The paternal great-grandsires are Buster and Lightning Bolt. The paternal great-granddams are Touch of Gold and Misty Night. The maternal great-grandsires are Running Right and Circle of Stars. The maternal great-granddams are Marigold and Violet.


Buster
Lightning Strikes
Touch of Gold
Aztec
Lightning Bolt
Silver
Misty Night
Thunderstorm
Running Right
Proud to Run
Marigold
Lucky Star
Circle of Stars
Bright Star
Violet

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THE PERFECT HORSE

Case 1

Jill and Mark Jones had recently purchased a paint broodmare. They were anxious to see the first foal from the mare. They bred the mare to a solid-colored quarter horse. They had assumed the foal would bear the paint markings. They were disappointed when their first foal was not a paint but a solid-colored filly.

Case 2

Jim Hill had bred one of his top broodmares to an outstanding stallion. He had hoped the mare would have a colt and perhaps he would be able to use the colt as a stud later on. When the mare finally foaled, Jim was disappointed that the foal was not a colt, but rather a filly. But, after several months went by it became apparent that this filly had outstanding conformation and a very good temperament.

Case 3

Mary Milman breeds race horses. She was anxiously awaiting one broodmare to foal since the mare had a good record of producing winners, and she was bred to an exceptional sire. When the mare foaled, Mary was excited because the foal was healthy and appeared to have good conformation. As the foal became older and started training, Mary realized that although the foal would make a good race prospect, it was not the outstanding athlete Mary had hoped for.

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LAP SHEET

STALLION

D2

Check the blank as you complete each step.

1. **Take** ___ the pretest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.

2. **Read** ___ the introduction, unit objective, and specific objectives.

3. **Do** ___ the focus assignments.

4. **Stop** ___ and have your instructor evaluate your work from the focus assignment. After your work has been evaluated, follow your instructor's recommendations.

5. **Study** ___ the Information Sheet, objectives 1-15.

Optional: Read ___ lab reports of semen evaluation.

6. **Do** ___ Assignment Sheet 1.

7. **Stop** ___ and have your instructor evaluate your work from the Assignment Sheet. After your work has been evaluated, follow your instructor's recommendations.

8. **Take** ___ the posttest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.

May be photocopied for student use.

WRITTEN TEST

STALLION

D2

Name ______________________ Score __________

OBJECTIVE 1

List conditions in the male reproductive system that cause infertility. Write the conditions in the blanks provided.

1. ______________________
2. ______________________
3. ______________________
4. ______________________
5. ______________________
6. ______________________
7. ______________________
8. ______________________

OBJECTIVE 2

Select from a list factors to consider in keeping a stallion in breeding fitness. Place an "X" in front of correct answers.

_____ 1. Observe daily for adverse health symptoms.

_____ 2. Reduce feed intake.

_____ 3. Exercise sufficiently.

_____ 4. Evaluate semen during and prior to breeding season.

_____ 5. Keep vaccinations current.

_____ 6. Keep stallion as inactive as possible.

_____ 7. Feed a well-balanced, proper diet.

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_____ 8. Keep stallion in isolation prior to breeding.

_____ 9. Keep an accurate documentation of each ejaculation.

_____ 10. Keep an accurate and current record on each stallion's health and evaluations.

OBJECTIVE 3

Describe the influences of hormones. Describe the influences of hormones in the blanks provided.

1. Follicle Stimulating Hormone (FSH) – ____________________
____

2. Luteinizing Hormone (LH) – ____________________
____

3. Testosterone – ____________________
____

OBJECTIVE 4

Describe breeding season behavior of stallions. Describe the breeding season behavior of stallions in the blanks provided.

____
____
____
____
____
____
____
____

May be photocopied for student use.

OBJECTIVE 5

Describe methods of semen collection. Describe the methods of semen collection in the blanks provided.

1. ______________________________

   ____

2. ______________________________

   ____

3. ______________________________

   ____

OBJECTIVE 6

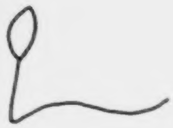
List precautions to take when handling collected semen. List the precautions in the blanks provided.

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________
6. ______________________________

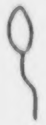
May be photocopied for student use.

OBJECTIVE 7

Label sperm cell abnormalities. Write the answer in the blanks beneath the sperm cells.



1. ______________



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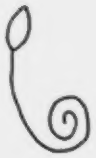

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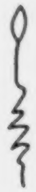

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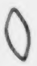

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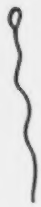

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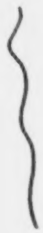

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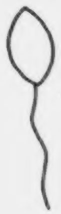

8. ______________

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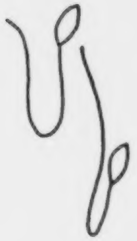

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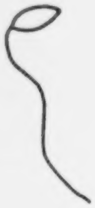

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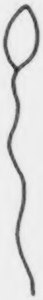
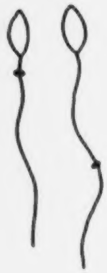
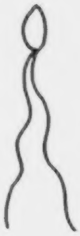


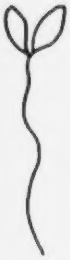
11. ______________



12. ______________



13. ______________



14. ______________

May be photocopied for student use.

OBJECTIVE 8

Describe components of semen evaluation. Describe the components of semen evaluation in the blanks provided.

1. Volume of ejaculate – ________________________________

____

2. Visual appraisal – ________________________________

____

3. Microscopic examination – ____________________________

____

____

   a. Progressive motility – ________________________

   ____

   b. Rate of motility – ____________________________

   ____

   c. Live-dead percentage – ________________________

   ____

   d. Concentration – _______________________________

   ____

   e. Morphology – _________________________________

   ____

May be photocopied for student use.

f. pH – ______________________________

____

____

g. Longevity – ______________________________

____

h. Blood cells – ______________________________

____

____

____

OBJECTIVE 9

List reasons for adding extender to semen. List the reasons in the blanks provided.

1. ______________________________

2. ______________________________

3. ______________________________

4. ______________________________

5. ______________________________

May be photocopied for student use.

OBJECTIVE 10

Arrange in order the steps in breeding season hygiene for a stallion. Number the steps below beginning with "1."

_____ Rinse the penis thoroughly.

_____ Place the stallion in surroundings where he will achieve an erection.

_____ Rinse the penis with clean water to remove soap.

_____ Wash the penis after copulation.

_____ Groom the stallion before placing him back in the stall or paddock.

_____ Disinfect all areas of the stallion that made contact with the mare.

_____ Wash the penis with mild soap and warm water.

OBJECTIVE 11

Explain methods and procedures of breeding. Explain the methods and procedures of breeding in the blanks provided.

1. ____

____

2. ____

____

3. ____

____

May be photocopied for student use.

OBJECTIVE 12

Arrange in order the steps in hand mating. Number the steps below beginning with "1".

____ Walk the mare for five minutes.

____ Wash and rinse stallion as soon as he dismounts.

____ Groom the stallion before placing him back in the stall or paddock.

____ Let the stallion get into the breeding position; observe for a flagging motion of the tail to indicate ejaculation.

____ Tease the mare to ensure that she is in heat.

____ Wash the genital area of the mare thoroughly; rinse thoroughly to remove all remaining soap.

____ Wrap the tail.

____ Wash the stallion with mild soap and water; rinse thoroughly.

____ Apply restraint methods to the mare.

____ Allow the stallion to work his way to the rear of the mare.

____ Allow the stallion to mount on the left side of the mare to avoid being kicked.

____ Immediately lead both horses away from each other.

OBJECTIVE 13

Describe preparation of artificial vagina for collection. Describe the preparation in the blanks provided.

____

____

____

____

____

May be photocopied for student use.

OBJECTIVE 14

Describe preparation of stallion for collection and live cover. Describe the preparation of stallion in the blanks provided.

OBJECTIVE 15

Explain collecting semen with artificial vagina. Explain collecting semen with artificial vagina in the blanks provided.

May be photocopied for student use.

____

____

____

____

OBJECTIVE 16 **Evaluated on the Assignment Sheet.**

May be photocopied for student use.

BREEDING OF THE EQUINE

Breeding is a natural instinct; in the wild, a stallion and mare (in estrus) will naturally seek each other to breed. In today's complex equine industry, many stallion and mare owners are unwilling to risk injury to horses which may occur by placing a stallion in a pasture with mares for breeding.

Breeding management has become a specialized segment within the equine industry. A successful breeding program requires knowledgeable and experienced individuals in areas ranging from handling the stallion and mare to taking care of the business aspects, such as breeding contracts.

Natural and artificial insemination are the two basic methods of breeding. The natural method, also called live cover breeding, is when the stallion physically mounts the mare. Live cover breeding is required by some breed associations. For example, the Jockey Club requires live cover breeding. Other reasons live cover breeding may be chosen are that it requires less knowledge in semen handling and an artificial insemination technician is not required. Disadvantages of live cover breeding include injury to the horses, risk of the spread of venereal diseases, and the number of mares which may be covered by a stallion.

Artificial insemination is used among many breeders that allow it for registration. The disadvantages of artificial insemination are that it necessitates more labor and expertise in semen collection, handling, and insemination. It also requires special equipment to ensure semen viability between collection and insemination. Artificial insemination is not allowed by some breed associations. The advantages of artificial insemination are that it reduces the risk of disease, it allows breeding of physically impaired mares, difficult stallions are easier to manage, it decreases stallion ejaculates since multiple mares may be bred from one ejaculate, and it reduces the chance of injury to horses associated with live cover.

Regardless of the method used, knowledgeable and experienced individuals are necessary. Stallions are unpredictable and must be competently handled.

May be photocopied for student use.

LAP SHEET

MARE

D3

Check the blank as you complete each step.

1. **Take** ___ the pretest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.
2. **Read** ___ the introduction, unit objective, and specific objectives.
3. **Do** ___ the focus assignments.
4. **Stop** ___ and have your instructor evaluate your work from the focus assignment. After your work has been evaluated, follow your instructor's recommendations.
5. **Study** ___ the Information Sheet, objectives 1-8.

Optional: Read ___ OSU Extension Fact Sheet No. 3974 *Reproductive Management of the Mare.*

Optional: Watch ___ the video *Reproductive Management of Mares.*

6. **Do** ___ Assignment Sheet 1.
7. **Stop** ___ and have your instructor evaluate your work from the Assignment Sheet. After your work has been evaluated, follow your instructor's recommendations.
8. **Study** ___ the Information Sheet, objectives 10-16.
9. **Do** ___ Assignment Sheet 2.
10. **Stop** ___ and have your instructor evaluate your work from the Assignment Sheet. After your work has been evaluated, follow your instructor's recommendations.
11. **Take** ___ the posttest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.

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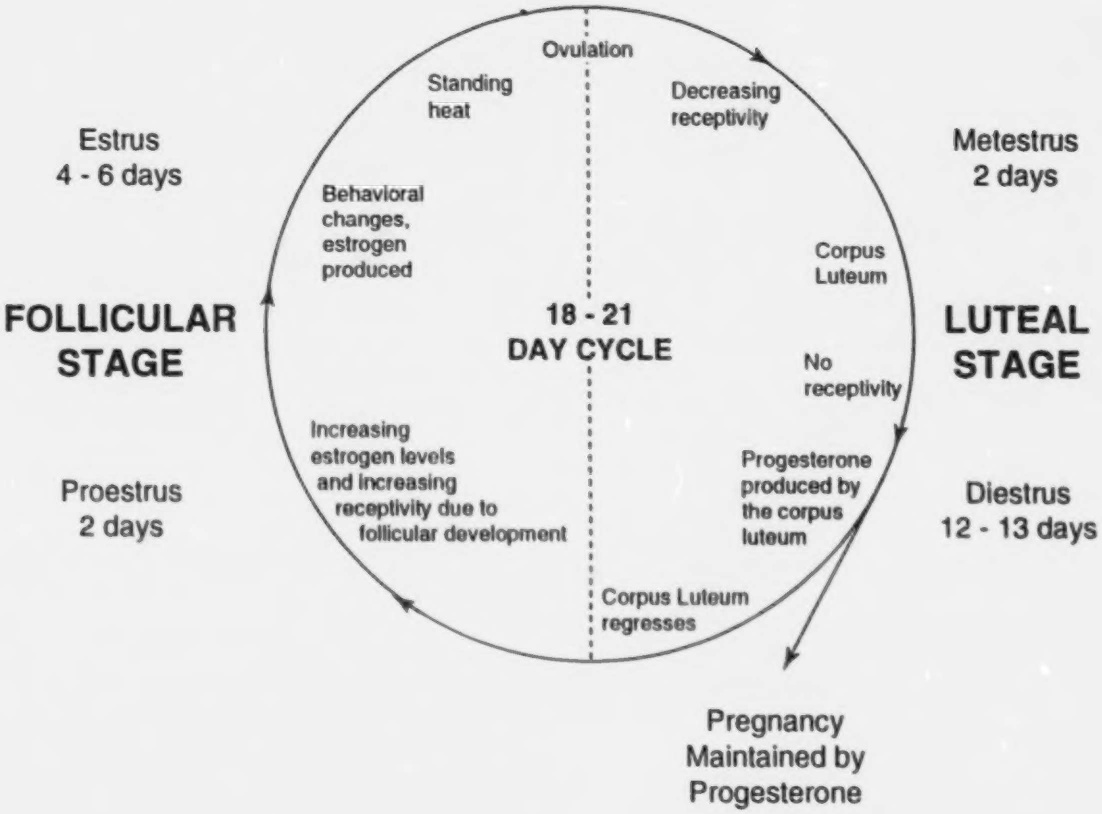
TM

ESTROUS CYCLE



Estrus
4 - 6 days

Metestrus
2 days

FOLLICULAR STAGE

LUTEAL STAGE

Proestrus
2 days

Diestrus
12 - 13 days

Ovulation

Standing heat

Decreasing receptivity

Behavioral changes, estrogen produced

Corpus Luteum

18 - 21
DAY CYCLE

No receptivity

Increasing estrogen levels and increasing receptivity due to follicular development

Progesterone produced by the corpus luteum

Corpus Luteum regresses

Pregnancy
Maintained by
Progesterone

May be photocopied for student use.

MARE

D3

Name ______________________ Score __________

OBJECTIVE 1

List conditions in the female reproductive system that cause infertility. Write the conditions in the blanks provided.

1. ______________________
2. ______________________
3. ______________________
4. ______________________
5. ______________________
6. ______________________
7. ______________________
8. ______________________
9. ______________________
10. ______________________
11. ______________________

526

May be photocopied for student use.

OBJECTIVE 2

Describe the mare's reproductive cycle. Describe the mare's reproductive cycle in the blanks provided.

May be photocopied for student use.

OBJECTIVE 3

Describe the influences of hormones. Describe the influences in the blanks provided.

1. Follicle stimulating hormone (FSH) – ______________________________
____
____

2. Estrogen – ______________________________
____
____

3. Luteinizing Hormone (LH) – ______________________________
____
____

4. Progesterone – ______________________________
____
____

5. Prostaglandin – ______________________________
____
____

528

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OBJECTIVE 4

Select from a list signs of estrus in the mare. Place an "X" in front of the correct signs.

_____ 1. Receptive attitude toward stallion

_____ 2. Raising tail

_____ 3. Pawing at the ground

_____ 4. Spreading hind legs apart

_____ 5. Sniffing the air

_____ 6. Relaxation of external genitalia

_____ 7. Kicking and biting

_____ 8. More frequent urination

_____ 9. Squatting

_____ 10. Increased appetite

_____ 11. Slight mucous discharge from vagina

_____ 12. "Winking" of the labia

OBJECTIVE 5

List in order breeding season hygiene for mares. List in order breeding season hygiene in the blanks provided.

____

____

____

____

____

____

____

May be photocopied for student use.

OBJECTIVE 6

Describe normal breeding characteristics of mares. Describe the characteristics in the blanks provided.

1. Age of puberty – ______________________________

____

2. Age to breed mares – ______________________________

____

3. Gestation period – ______________________________

____

4. Foal heat – ______________________________

____

OBJECTIVE 7

Select from a list management practices to consider in teasing mares. Place an "X" in front of correct management practices.

____ 1. Use a solid barrier four feet high to separate the mare and stallion while teasing.

____ 2. Tease all mares every day.

____ 3. Immediately take mare away from teaser if she shows any sign of interest.

____ 4. Tease mares every other day.

____ 5. Do not tease older mares.

____ 6. Note the reaction of the mare before, during, and after the presence of the stallion.

____ 7. Place the mare and stallion out in the same pasture.

____ 8. Keep accurate records.

May be photocopied for student use.

_____ 9. Use a teaser that shows continued interest with a moderate degree of nickering and demonstration of masculinity.

_____ 10. Use a gelding as the teaser.

_____ 11. Tease the mare by allowing the stallion to start at the mare's head and progress toward the rear working back and forth.

OBJECTIVE 8 **Select from a list items to be included in record keeping during breeding season.** Place an "X" in front of correct items.

_____ 1. Foaling process

_____ 2. Projected sex of the foal

_____ 3. Projected color of the foal

_____ 4. Health comments

_____ 5. Any bad habits mare may possess

_____ 6. Cost of employee taking care of the mare

_____ 7. Reaction to the stallion

_____ 8. Date and results of cultures and biopsies

_____ 9. Whether the mare is open, maiden, or lactating

_____ 10. Date of the last estrus period

_____ 11. Number of days between estrus periods

_____ 12. Length of estrus

OBJECTIVE 9 **Evaluated on Assignment Sheet 1.**

May be photocopied for student use.

OBJECTIVE 10

List ways to detect pregnancy. List the ways to detect pregnancy in the blanks provided.

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________
6. ______________________________

OBJECTIVE 11

List important items relating to care of mare and foal during gestation. List important items relating to care in the blanks provided.

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________

May be photocopied for student use.

OBJECTIVE 12

List noninfectious causes of abortion. Write noninfectious causes of abortion in the blanks provided.

1. ____
2. ____
3. ____
4. ____
5. ____
6. ____
7. ____
8. ____

OBJECTIVE 13

Match infectious causes of abortion to the correct descriptions. Write the correct letter in the blank.

A. Mycotic placentitis
B. Streptococcus zooepidemicus
C. Brucella equi
D. Escherichia coli
E. Salmonella brucellas
F. Equine viral abortion
G. Brucella abortus
H. Salmonella abortus equi

____ 1. Contagious abortion which causes Bang's disease in cattle and Undulant fever in humans

____ 2. Most prevalent bacteria which causes genital tract infection in horses

____ 3. Organism which is normally in the intestinal tract but can result in abortion if introduced into the reproductive tract

____ 4. Respiratory tract infection; abortion usually occurs in last one-third of pregnancy

____ 5. Digestive tract infection that can be controlled or prevented by vaccination

____ 6. Fungal infection caused by unsanitary breeding or examination procedures

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OBJECTIVE 14

Select from a list measures to take to prevent abortion. Place an "X" in front of correct measures.

_____ 1. Avoid situations or conditions that might cause injury.

_____ 2. Do NOT give vaccinations or deworm mare while she is pregnant.

_____ 3. Avoid breeding an infected mare or stallion.

_____ 4. Use sanitary conditions in the breeding procedure.

_____ 5. Avoid human contact with the pregnant mare.

_____ 6. Submit all aborted materials for laboratory analysis.

_____ 7. Vaccinate all mares.

_____ 8. Keep pregnant mares in small quarters.

_____ 9. Isolate and quarantine animals until a veterinarian approves the release.

_____ 10. Do not use more than one stallion at the facility.

_____ 11. Provide proper exercise; avoid fatigue, strain, or excitement.

_____ 12. Have a veterinarian check all barren mares.

_____ 13. Thoroughly disinfect the immediate location of aborted materials, including the stall, the feet of the mare, and the clothing of the attendant.

_____ 14. Do not breed mares that have foals at their side.

_____ 15. Provide fresh, clean water and nutritious ration.

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OBJECTIVE 15

Discuss the use of cultures and biopsies in the mare. Discuss the use of cultures and biopsies in the blanks provided.

OBJECTIVE 16

Describe the use of new technologies in reproductive management of the mare. Describe the use of new technologies in the blanks provided.

OBJECTIVE 17

Evaluated on Assignment Sheet 2.

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BROODMARES

Broodmares require special consideration and attention from horse owners or caretakers. The decision to breed a mare is both a financial and work commitment. Before purchasing a mare intended as a broodmare, the owner should consult with a veterinarian and other knowledgeable individuals. After the horse has been purchased is the wrong time to find out the mare is considered inferior from the breeding farm viewpoint or has fertility problems.

The costs involved in having a broodmare include stud fees, veterinarian fees, and the normal costs associated with having a horse such as feed, farrier, etc. If the owner is anticipating selling the foal, these costs must be weighed against the potential market value of the foal.

After deciding to breed a mare, one of the first decisions an owner will be concerned with is the stud. The best possible stallion within the owner's budget should be selected. Owners of top studs often only book a certain number of mares and have restrictions on the mare (such as quality and breeding potential). Stallions are a major investment and owners and syndicates do not want inferior mares bred to their stallions. An inferior mare's foal that is not of high quality can jeopardize the reputation of a stallion.

The owner must make the appropriate preparations if the mare is taken to a breeding farm. The main obligation is to ensure the mare is in good health and has the required health papers, Coggins test, etc.

Once the mare is pregnant, special consideration must be taken for her care. The mare's nutritional requirements must be met; she must be checked by a veterinarian periodically; and other factors such as exercise, vaccinations, and deworming must be taken care of.

The long awaited moment of birth is not always observed. Mares are secretive and can foal very quickly. The gestation period for mares has a range which makes determining the exact date of birth almost impossible. The majority of mares foal without any complications.

Once the foal is born the care of the broodmare is not over. The mare and foal demand special attention and observation following parturition. The broodmare must be maintained in good health and be ready for the next breeding.

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LAP SHEET

PARTURITION

D4

Check the blank as you complete each step.

1. **Take** ___ the pretest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.
2. **Read** ___ the introduction, unit objective, and specific objectives.
3. **Do** ___ the focus assignments.
4. **Stop** ___ and have your instructor evaluate your work from the focus assignment. After your work has been evaluated, follow your instructor's recommendations.
5. **Study** ___ the Information Sheet, objectives 1-7.
6. **Do** ___ Assignment Sheet 1.
7. **Stop** ___ and have your instructor evaluate your work from the Assignment Sheet. After your work has been evaluated, follow your instructor's recommendations.
8. **Study** ___ the Information Sheet, objectives 9-12.
9. **Do** ___ Assignment Sheet 2.
10. **Stop** ___ and have your instructor evaluate your work from the Assignment Sheet. After your work has been evaluated, follow your instructor's recommendations.
11. **Take** ___ the posttest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.

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INSTRUCTOR'S RESOURCE PACKAGE - Equine Management and Production
TRANSPARENCY MASTER - **CIMC** - D4 - 1

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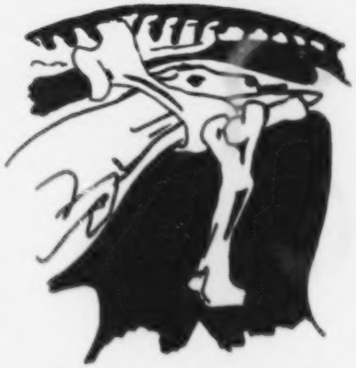
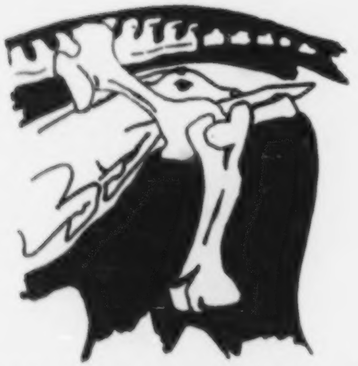
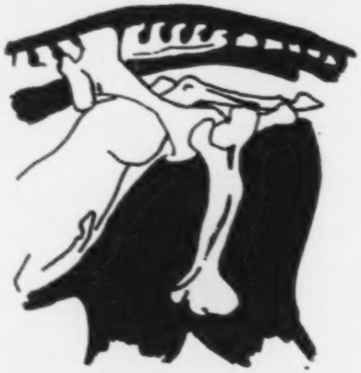


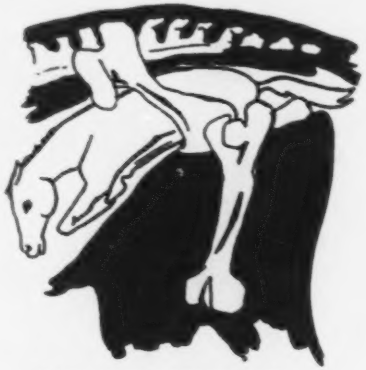
Normal presentation



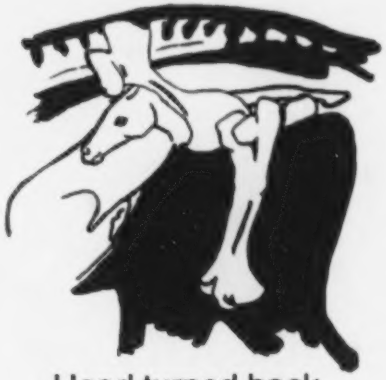
One or both forelegs back



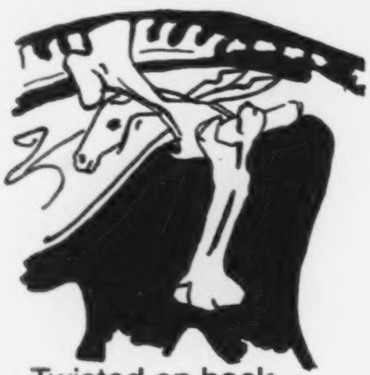
Breech Birth



Abnormal breech



Head turned back



Twisted on back

TM

WRITTEN TEST | ***PARTURITION*** | **D4**

Name ______________________________ Score __________

OBJECTIVE 1

Discuss steps to take in preparation for foaling. Discuss the steps in the blanks provided.

1. ______________________________

2. ______________________________

3. ______________________________

4. ______________________________

5. ______________________________

6. ______________________________

7. ______________________________

8. ______________________________

9. ______________________________

May be photocopied for student use.

540

10. ______________________________

____

OBJECTIVE 2

List items to include in a foaling kit. List items to include in the blanks provided.

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________
6. ______________________________
7. ______________________________
8. ______________________________
9. ______________________________
10. ______________________________
11. ______________________________
12. ______________________________
13. ______________________________
14. ______________________________
15. ______________________________
16. ______________________________

May be photocopied for student use.

OBJECTIVE 3 **List essential characteristics of individual offering assistance in foaling process.** List the characteristics in the blanks provided.

1. ______________________
2. ______________________
3. ______________________
4. ______________________
5. ______________________
6. ______________________
7. ______________________

OBJECTIVE 4 **List indications of approaching parturition.** Write the indications in the blanks provided.

ONE MONTH PRIOR TO PARTURITION

1. ______________________
2. ______________________

ONE WEEK PRIOR TO PARTURITION

1. ______________________
2. ______________________
3. ______________________
4. ______________________
5. ______________________
6. ______________________
7. ______________________
8. ______________________

542

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12-48 HOURS PRIOR TO PARTURITION

1. ______________________________

2. ______________________________

3. ______________________________

LABOR IS NEAR

1. ______________________________

2. ______________________________

3. ______________________________

4. ______________________________

5. ______________________________

6. ______________________________

7. ______________________________

8. ______________________________

9. ______________________________

OBJECTIVE 5

Describe actions to take in the foaling process. Write the actions to take in the blanks provided.

1. ______________________________

2. ______________________________

3. ______________________________

4. ______________________________

5. ______________________________

6. ______________________________

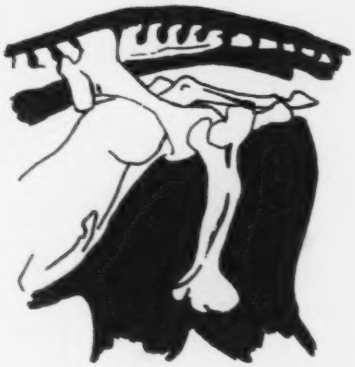
7. ______________________________

8. ______________________________

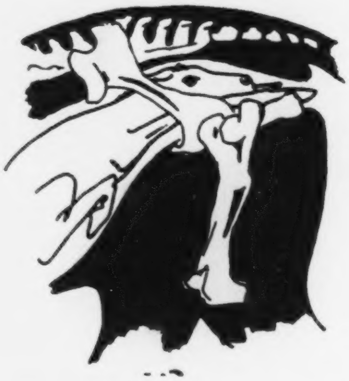
9. ______________________________

May be photocopied for student use.

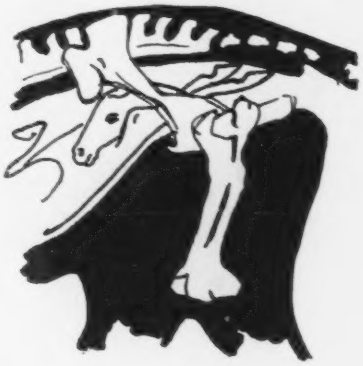
OBJECTIVE 6 **Identify normal presentation and malpresentations of the foal.** Write the name of the presentation in the blanks provided.



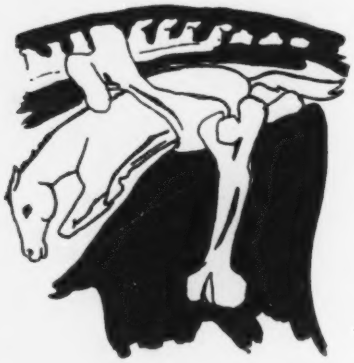
1. ____________________



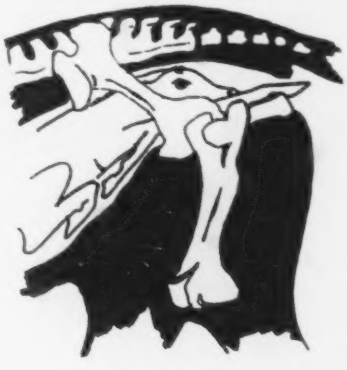
2. ____________________



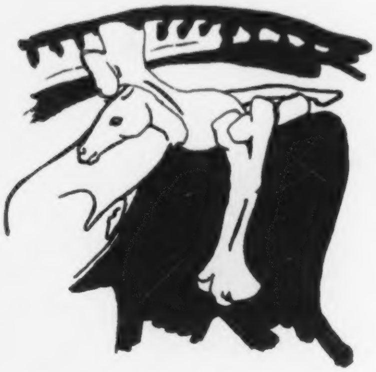
3. ____________________



4. ____________________



5. ____________________



6. ____________________

May be photocopied for student use.

OBJECTIVE 7 **Select from a list foaling conditions requiring veterinarian's assistance.** Write an "X" in front of foaling conditions requiring veterinarian's assistance.

_____ 1. Placenta retained for more than two hours

_____ 2. Mare refuses to accept foal

_____ 3. Foal nurses shortly after getting up

_____ 4. Malpresentation of the foal

_____ 5. Slow and difficult labor or delivery

_____ 6. Mare lies down and gets up during the foaling process

_____ 7. Hard labor with no results

_____ 8. Hemorrhaging of the mare from vulva or foal from navel stump

_____ 9. Water breaks while mare is standing

_____ 10. Mare does not get up within ten minutes

_____ 11. Foal fails to nurse within two hours

_____ 12. Mare and/or foal failing to get up within an hour

OBJECTIVE 8 **Evaluated on Assignment Sheet 1.**

OBJECTIVE 9 **Describe how to care for a newborn foal.** Describe how to care for a newborn foal in the blanks provided.

1. ____

____

2. ____

____

3. ____

____

May be photocopied for student use.

4. ______________________________

____

5. ______________________________

____

6. ______________________________

____

OBJECTIVE 10

Describe how to care for a postpartum mare. Describe how to care for a postpartum mare in the blanks provided.

1. ______________________________

____

2. ______________________________

____

3. ______________________________

____

4. ______________________________

____

5. ______________________________

____

May be photocopied for student use.

OBJECTIVE 11

Match complications following parturition to their descriptions. Write the correct letter in the blank.

A. Foal colic
B. Lactation imbalance
C. Retained placenta
D. Foal founder
E. Mare founder
F. Lacerations and tears
G. Postbirth bleeding
H. Agalactia
I. Postpartum hemorrhage

_____ 1. Failure of the afterbirth to separate from the uterus following foaling

_____ 2. Wounds of the vulva caused by the foal being too large or abnormal presentation of the foal

_____ 3. Contraction of the uterus following foaling

_____ 4. Hormone imbalance sometimes corrected by the foal attempting to nurse

_____ 5. Rupture of the uterine arteries

_____ 6. Small amount of placenta remaining in the uterus following the mare's expulsion of afterbirth

OBJECTIVE 12

List conditions that prevent breeding on foal heat. Write the conditions in the blanks provided.

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________

OBJECTIVE 13

Evaluated on Assignment Sheet 2.

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A FOAL OF YOUR OWN

Chris had been around horses for most of his life and now owned two mares and a gelding. He had started showing in youth shows and was now competing in amateur shows. For quite some time, Chris had wanted a foal that he could raise, train, and show. After careful consideration, Chris decided to breed one of his mares. The mare was five years old and had good conformation so Chris had high hopes for her foal.

Chris selected a stallion which he felt would complement his mare's conformation and also had a good sire record. Before breeding his mare he had a veterinarian examine her to ensure she was in good health. The breeding farm where the stallion was located also required a Coggins test on the mare.

The mare was bred and Chris was careful to ensure she received the proper care during her pregnancy. He consulted with a veterinarian to determine when the mare should receive deworming and vaccinations. He also ensured that the mare received a balanced ration. Chris also read about brood mares and learned all he could about both the pregnancy and foaling process.

When the time drew closer for the foal's birth, Chris knew what preparations to take and also what signs to watch for. He prepared one of his stalls to use as a foaling stall. Chris contacted the veterinarian and informed the veterinarian that his mare was approaching parturition. He had also assembled a foaling kit to use.

Chris placed the mare in the foaling stall and checked on her at regular intervals. When the mare's water broke, Chris knew the foaling process had begun. He prepared the mare by washing her vulva and wrapping her tail. Chris knew he was fortunate to be able to watch the foaling process. He had read that mares are secretive and can foal in a matter of minutes. Chris knew from his reading that he should not be too involved in the foaling process, but should let nature take its course. There were no complications and Chris watched in amazement as his new foal was born. The foal was a beautiful bay filly. Although there were no complications, Chris had the veterinarians's phone number and notes regarding the mare's foaling in case there had been problems.

Once the foal was born, Chris knew what to do. Several items Chris took care of were iodining the navel stump and giving the foal an enema after the foal stood and nursed. He also checked on both the mare and foal to ensure they were recovering from the birth. After Chris was sure both the mare and foal were all right, he left them alone. The veterinarian would come out tomorrow to check on both the mare and foal. Tetanus antitoxin would be administered subcutaneously at that time.

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LAP
SHEET

CARE OF MARE AND FOAL

D5

Check the blank as you complete each step.

1. **Take** ___ the pretest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.

2. **Read** ___ the introduction, unit objective, and specific objectives.

3. **Do** ___ the focus assignments.

4. **Stop** ___ and have your instructor evaluate your work from the focus assignment. After your work has been evaluated, follow your instructor's recommendations.

5. **Study** ___ the Information Sheet, objectives 1-6.

Optional: Read ___ OSU Extension Fact Sheet No. 3978 *Weaning Management Practices For Foals* or No. 3985 *Nursing Foal Management.*

6. **Do** ___ the Assignment Sheet.

7. **Stop** ___ and have your instructor evaluate your work from the Assignment Sheet. After your work has been evaluated, follow your instructor's recommendations.

8. **Take** ___ the posttest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.

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WRITTEN TEST

CARE OF MARE AND FOAL

D5

Name ____________________ Score __________

OBJECTIVE 1

Describe management practices important in caring for the mare and neonate foal. Describe the management practices in the blanks provided.

550

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OBJECTIVE 2

Describe management practices important in caring for the mare and foal until weaning. Describe management practices in the blanks provided.

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OBJECTIVE 3

Match common diseases and problems to watch for in foals to their definitions. Write the correct letter in the blank.

A. Yellow fever
B. Colic
C. Patent urachus
D. Epilepsy
E. Septicemias
F. Heaves
G. Convulsive syndrome
H. Tetanus
I. Meconium retention
J. Ruptured spleen
K. Equine influenza
L. Ruptured bladder
M. Hemolytic anemia
N. Patent urachus
O. Joint Ill
P. Diarrhea

_____ 1. Excessive defecation

_____ 2. Caused by a spore-forming bacterium that produces a toxin

_____ 3. Arthritic condition caused by infectious organisms either ingested by the foal or entered through the navel cord shortly after birth

_____ 4. Infections that affect the entire body because of bacteria in the bloodstream

_____ 5. Expression of abdominal pain

_____ 6. Urachus fails to close

_____ 7. Caused by decreased flow of oxygen to the brain prior to or during birth

_____ 8. Fecal matter collected in large intestine during gestation becomes impacted

_____ 9. Result of pressure on a full bladder during delivery or a sharp pull on the umbilical cord after birth

_____ 10. The foal's red blood cells reject the antibodies in the mare's colostrum

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OBJECTIVE 4

Match common diseases and problems of foals to their symptoms. Write the correct letter in the blank.

A. Yellow fever
B. Colic
C. Patent urachus
D. Epilepsy
E. Septicemias
F. Heaves
G. Convulsive syndrome
H. Tetanus
I. Meconium retention
J. Ruptured spleen
K. Equine influenza
L. Ruptured bladder
M. Hemolytic anemia
N. Patent urachus
O. Joint Ill
P. Diarrhea

____ 1. Soft, watery feces, mild dehydration

____ 2. Depression, weakness, failure to suckle, rapid breathing, and abnormally high or low temperature

____ 3. Tail switching, rolling, straining to urinate or defecate

____ 4. Foal strains to urinate, becoming depressed and progressively weaker

____ 5. Convulsions and respiratory problems

____ 6. Urine drips from foal's navel

____ 7. Straining, tail switching, rolling, lying in unusual positions

____ 8. Progressive weakness that starts in the first 24 to 48 hours of life and progresses to the foal becoming too weak to stand; increased heart rate and respiratory rate; one sign is jaundice

____ 9. Fever, lameness and stiffness

____ 10. Stiffness of muscles in jaw, neck, hind limbs, general stiffness, muscle spasms, sweating, increased heart and respiratory rates

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OBJECTIVE 5

Describe considerations in weaning. Describe considerations in the spaces below.

OBJECTIVE 6

Describe nutrition requirements for lactating mares and foals. Describe the requirements in the spaces below.

OBJECTIVE 7

Evaluated on the Assignment Sheet.

554

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IMPRINT TRAINING: WHAT IS IT?

A newborn foal is learning about its environment and surroundings virtually from the moment it is born. The imprinting period is the period of life time in which a species is highly receptive to information. For many animals, such as the horse, which in the past had to fend off predators, the imprinting period begins at birth so that the young animals are up and moving quickly. Imprint training seeks to take advantage of this imprinting period by desensitizing the foal to stimuli.

The idea of imprint training is that if the foal is desensitized to stimuli, the foal will not fear those stimuli in the future. The foal is desensitized to tactical (touch), auditory (hearing), visual, and olfactory (smell) stimuli. Each repetition is repeated 30-50 times. Imprint training consists of taking a newborn foal and repetitiously rubbing every part of its body. Every body opening is desensitized. For example, the nostrils and ears would be desensitized by placing a finger in them and gently rubbing. The foal is also desensitized to sound, such as running the clippers over the foal's body to acquaint the foal with the noise. Imprint training takes about 45 minutes and is ideally done on newborn foals but may be performed on older foals.

The goal of imprint training is to make the horse easier to handle in the future. Activities such as taking medication, trimming and shoeing, and basic training will be easier since the foal has been imprint trained. The theory is that the horse will not fear someone performing a procedure on the horse.

The methods for imprint training the foal were developed by Robert Miller, an equine veterinarian. He has written a book on imprint training and has also developed a video *Imprint Training the Foal.*

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LAP SHEET

IDENTIFICATION, SELECTION, AND MARKETING OF THE HORSE

E1

Check the blank as you complete each step.

1. **Take** ___ the pretest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.
2. **Read** ___ the introduction, unit objective, and specific objectives.
3. **Do** ___ the focus assignments.
4. **Stop** ___ and have your instructor evaluate your work from the focus assignment. After your work has been evaluated, follow your instructor's recommendations.
5. **Study** ___ the Information Sheet, objectives 1-9.
6. **Do** ___ Assignment Sheet 1.
7. **Stop** ___ and have your instructor evaluate your work from the Assignment Sheet. After your work has been evaluated, follow your instructor's recommendations.
8. **Study** ___ the Information Sheet, objective 11.
9. **Ask** ___ your instructor to demonstrate the guidelines and procedures in Job Sheet 1. Use the Job Sheet to follow along. Pay careful attention to any guidelines, cautions, and warnings.
10. **Practice** ___ the procedures demonstrated by your instructor. Use the Job Sheet as a guide. Notify your instructor when you are ready to perform the procedures for evaluation.
11. **Stop** ___ and have your instructor evaluate your work from the Job Sheet. After your work has been evaluated, follow your instructor's recommendations.
12. **Study** ___ the Information Sheet, objectives 13-14.

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13. **Ask** ___ your instructor to demonstrate the guidelines and procedures in Job Sheet 2. Use the Job Sheet to follow along. Pay careful attention to any guidelines, cautions, and warnings.

14. **Practice** ___ the procedures demonstrated by your instructor. Use the Job Sheet as a guide. Notify your instructor when you are ready to perform the procedures for evaluation.

15. **Stop** ___ and have your instructor evaluate your work from the Job Sheet. After your work has been evaluated, follow your instructor's recommendations.

16. **Study** ___ the Information Sheet, Objectives 16-17.

17. **Do** ___ Assignment Sheet 2.

18. **Stop** ___ and have your instructor evaluate your work from the Assignment Sheet. After your work has been evaluated, follow your instructor's recommendations.

19. **Take** ___ the posttest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.

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WRITTEN TEST

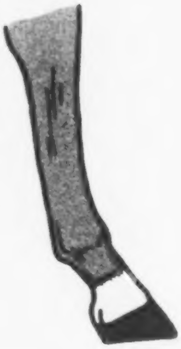
IDENTIFICATION, SELECTION, AND MARKETING OF THE HORSE

E1

Name ______________________ Score __________

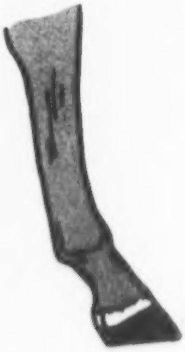
OBJECTIVE 1

Identify and describe common Quarter Horse leg markings. Write the name of the marking and a short description in the blanks provided.



1. ______________________________

____



2. ______________________________

____

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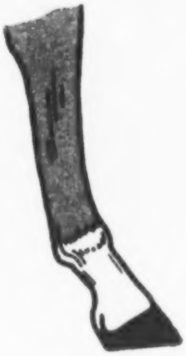
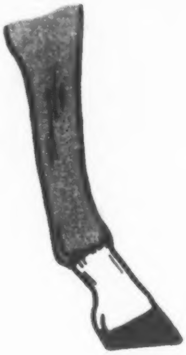


3. ____

____



4. ____

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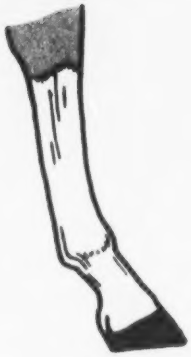
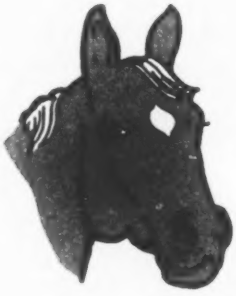


5. ______________________________

____

OBJECTIVE 2

Identify and describe common Quarter Horse head markings. Write the name of the marking and a short description in the blanks provided.



1. ______________________________

____

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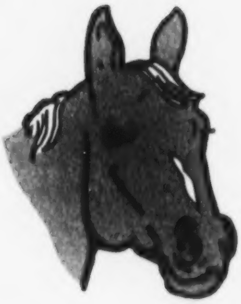
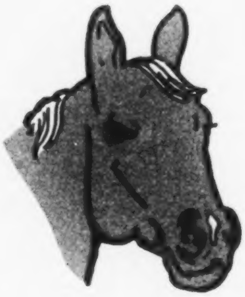
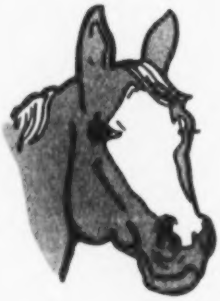


2.



3.



4.

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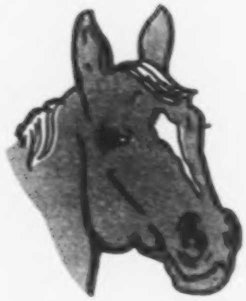
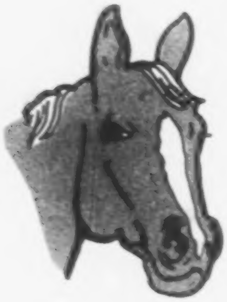


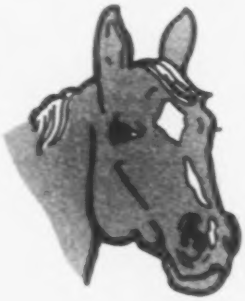
5. ______________________________

____



6. ______________________________

____



7. ______________________________

____

May be photocopied for student use.

OBJECTIVE 3

Describe common colors recognized by the American Quarter Horse Association. Write the colors and a brief description in the blanks provided.

1. ____

____

____

2. ____

____

____

3. ____

____

____

4. ____

____

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5. ____

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____

6. ____

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____

May be photocopied for student use.

7. ______________________________

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8. ______________________________

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9. ______________________________

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10. ______________________________

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11. ______________________________

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12. ______________________________

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13. ______________________________

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May be photocopied for student use.

OBJECTIVE 4

Describe color patterns of the American Paint Horse. Describe the color patterns in the blanks provided.

1. Overo - ____

____

____

____

____

____

____

____

2. Tobiano - ____

____

____

____

____

____

____

____

____

____

3. Tovero - ____

____

May be photocopied for student use.

OBJECTIVE 5

List distinguishing characteristics of the Appaloosa. Write the distinguishing characteristics in the blanks provided.

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________

OBJECTIVE 6

List colors recognized by the Arabian Horse Registry. Write the colors in the blanks provided.

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________

OBJECTIVE 7

List colors recognized by the Jockey Club. Write the colors in the blanks provided.

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________
6. ______________________________

May be photocopied for student use.

OBJECTIVE 8

Match natural gaits to their descriptions. Write the correct letter in the blank.

A. walk
B. jog
C. trot
D. pace
E. run
F. canter

_____ 1. Even, two-beat gait; lateral front and rear feet work together

_____ 2. Even, two-beat gait; diagonal front and rear feet work together

_____ 3. Three-beat gait; opposite front from lead and rear with lead working together and other two legs working independently

_____ 4. Slow, four-beat gait in which all four feet are working independently

OBJECTIVE 9

List factors to consider when selecting a horse to purchase. Write the factors in the blanks provided.

1. ____________________
2. ____________________
3. ____________________
4. ____________________
5. ____________________
6. ____________________
7. ____________________
8. ____________________
9. ____________________
10. ____________________

May be photocopied for student use.

11. ______________________________

12. ______________________________

13. ______________________________

OBJECTIVE 10 **Evaluated on Assignment Sheet 1.**

OBJECTIVE 11 **Describe normal measurements pertinent to a horse.** Write a description of the measurements in the blanks provided.

1. ______________________________
____

2. ______________________________
____

3. ______________________________
____

OBJECTIVE 12 **Evaluated on Job Sheet 1.**

OBJECTIVE 13 **Describe changes in horse's teeth with advancing age.** Write the changes in the blanks provided.

____

____

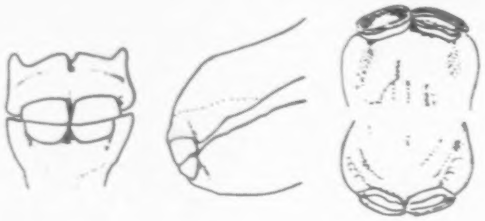
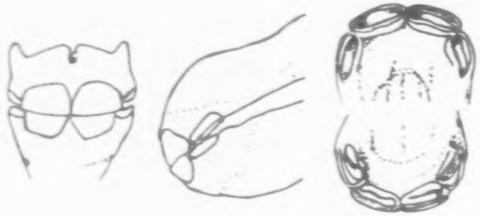
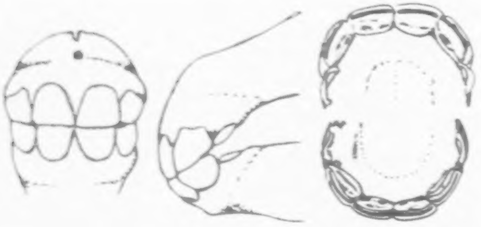
____

____

May be photocopied for student use.

OBJECTIVE 14

Complete a chart on determining age of horse by appearance and description of teeth. Complete the chart given below.

Drawing of teeth	Age of Animal	Description of teeth
	1. ____________	Central temporary incisors appear
	1 to 3 months	2. ____________ ____________
	8 to 9 months	3. ____________ ____________

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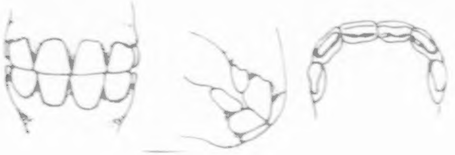
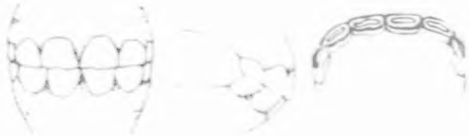
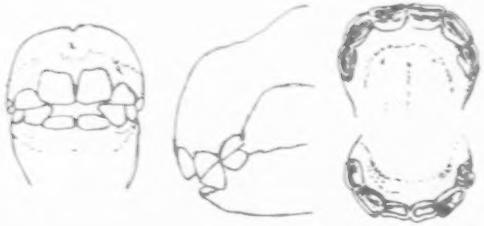
Drawing of teeth	Age of Animal	Description of teeth
	4. ____________________	All temporary incisors have appeared with central incisors showing wear
	2 years of age	5. ____________________ ____________________ ____________________
	2 1/2 years of age	6. ____________________ ____________________ ____________________

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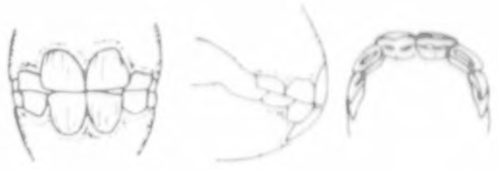
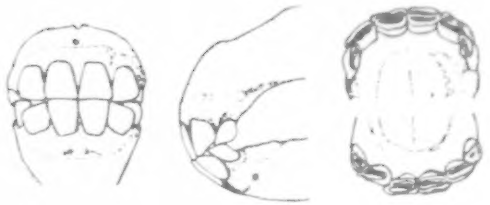
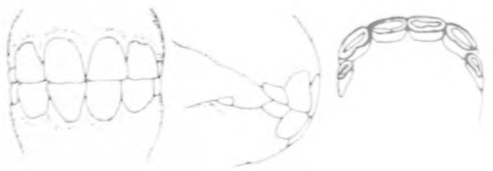
Drawing of teeth	Age of Animal	Description of teeth
	7. ______________	Has central permanent up and in wear
	3 1/2 years of age	8. ______________ ______________ ______________
	9. ______________	Central and lateral permanent in wear

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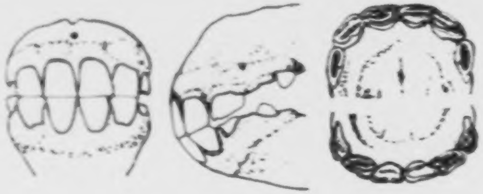
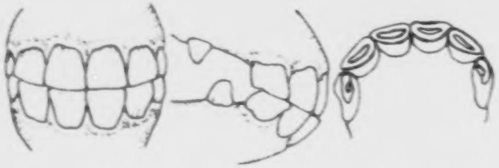
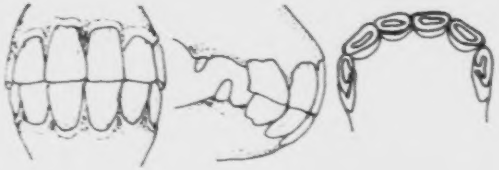
Drawing of teeth	Age of Animal	Description of teeth
	10.______________	Third or corner permanent incisors appear; canine teeth appear in males at 4-5 years of age
	5 years of age	11. ______________ ______________ ______________
	12. ______________	All show a central infundibular depression or "cup"

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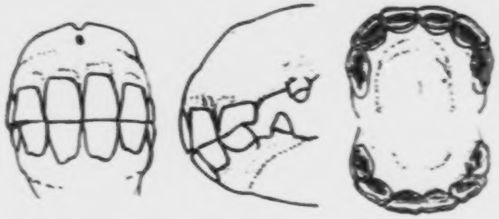
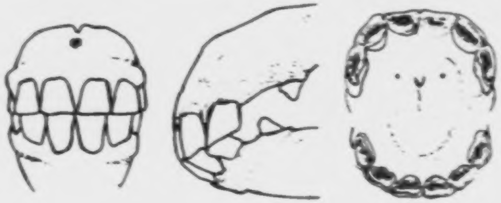
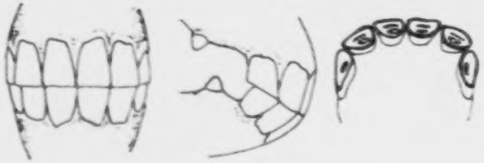
Drawing of teeth	Age of Animal	Description of teeth
	7 years of age	13. ____________________ ____________________ ____________________
	14. ____________________	Cups worn out of lateral incisors, and dental "star" appears on lower incisors
	15. ____________________	Cups also worn out of all lower and central upper incisors, and dental "star" appears on upper laterals as well as centrals; low central incisors practically triangular

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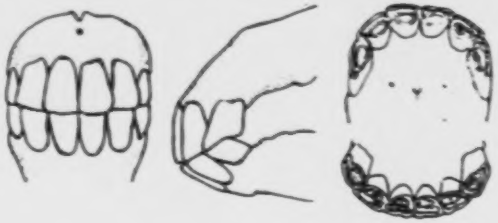
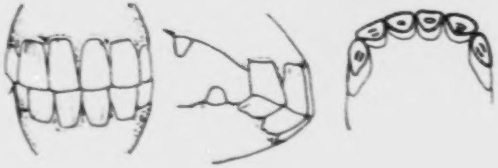
Drawing of teeth	**Age of Animal**	**Description of teeth**
	16. ________________	Cups also worn out of upper laterals, and dental "star" is present on all incisors both upper and lower; upper and lower incisors have begun to slope forward
	11 to 12 years of age	17. ________________ ________________ ________________ ________________ ________________

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OBJECTIVE 15 **Evaluated on Job Sheet 2.**

OBJECTIVE 16 **List general considerations in marketing a horse.** Write the considerations in the blanks provided.

1. ____________________
2. ____________________
3. ____________________
4. ____________________
5. ____________________
6. ____________________
7. ____________________
8. ____________________
9. ____________________
10. ____________________
11. ____________________

OBJECTIVE 17 **List means of marketing the horse.** Write the means of marketing the horse in the blanks provided.

1. ____________________
2. ____________________
3. ____________________
4. ____________________
5. ____________________

OBJECTIVE 18 **Evaluated on Assignment Sheet 2.**

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LAP SHEET

JUDGING

E2

Check the blank as you complete each step.

1. **Take** ___ the pretest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.
2. **Read** ___ the introduction, unit objective, and specific objectives.
3. **Do** ___ the focus assignments.
4. **Stop** ___ and have your instructor evaluate your work from the focus assignment. After your work has been evaluated, follow your instructor's recommendations.
5. **Study** ___ the Information Sheet, objectives 1-9.
6. **Do** ___ Assignment Sheet 1.
7. **Stop** ___ and have your instructor evaluate your work from the Assignment Sheet. After your work has been evaluated, follow your instructor's recommendations.
8. **Do** ___ Assignment Sheet 2.
9. **Stop** ___ and have your instructor evaluate your work from the Assignment Sheet. After your work has been evaluated, follow your instructor's recommendations.
10. **Do** ___ Assignment Sheet 3.
11. **Stop** ___ and have your instructor evaluate your work from the Assignment Sheet. After your work has been evaluated, follow your instructor's recommendations.
12. **Take** ___ the posttest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.

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Sample Notes for Oral Reasons

NAME Jane Smith
CLASS JUDGED Quarter Horse Mares

Observations

Horse No.	General Appearances	Action
1	Grey, typey head, long coupling. Coarse angles.	Sluggish.
2	Bay with star. Good shoulder. Straight legs. Deep in heart girth.	Short stride.
3	Bay, no markings. Balanced. Deep in heart girth. Refined and feminine.	Free moving. Correct hock action.
4	Chestnut. Week back and coarse.	Short stride. Paddles in front.

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Organizing Reasons for Presentation

REASONS FOR PLACING	ADMIT OR GRANT	FAULTS
3/1 Balance, deeper in heart girth, stylish front, sharper withers, leveler croup, cleaner in hocks, truer stride	1/3 None	1/ Lacks style and quality, long coupling, coarse ankles
1/2 Shorter, broader head, longer neck, deeper in heart, more muscle in stifle, correct on front legs, rugged bone	2/1 Shorter back	2/ Buck-kneed, lacks ruggedness
2/4 Broader head, sharper withers, stronger back and loin, level croup, flatter bone, cleaner ankles	4/2 Moves closer at hocks	4/ Flat withers, coarse bone, weak back

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WRITTEN TEST

JUDGING

E2

Name ______________________ Score __________

OBJECTIVE 1

Describe factors to consider in judging halter classes. Describe the factors in the blanks provided.

1. ______________________

2. ______________________

3. ______________________

4. ______________________

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5. ______________________________

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6. ______________________________

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OBJECTIVE 2 **Complete a chart on desirable and undesirable characteristics of horses' anatomy.** Write the characteristics in the blanks provided.

Anatomy and Structure	**Desirable Characteristics**	**Undesirable Characteristics**
Head	Size of head in proportion to size of body; good breed type and attractiveness	1. ______________
Ears	2. ______________	Flop-eared; motionless; set too high or too low
Eyes	Big, full, prominent with a dark rich hazel color; set on corners of head	3. ______________
Nostrils	Large with skin clear; mucous membranes rosy-colored at rest and deep red with clear liquid discharge following exercise	4. ______________

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Anatomy and Structure	**Desirable Characteristics**	**Undesirable Characteristics**
Mouth	Teeth meet evenly	5. ____________________ ____________________
Neck	6. ____________________ ____________________	Short, bulky, and thick; ewe-necked
Withers	Prominent	7. ____________________ ____________________
Back	8. ____________________ ____________________	Sagging or swaybacked; convex or roached back
Loin	9. ____________________ ____________________	Weak muscling
Croup	Uniform width with hips and turned to allow rear legs to be in proper position	10. ____________________ ____________________
Chest	Proportionate width to house heart and lungs	11. ____________________ ____________________
Shoulder	Long and sloping	12. ____________________ ____________________
Forearm	13. ____________________	Short
Knee	14. ____________________ ____________________ ____________________	Calf-kneed, buck-kneed, bench-kneed, open-kneed
Hock	Lean, wide, and deep in it proportion; well open as viewed from the side and properly directed as viewed from rear	15. ____________________ ____________________ ____________________ ____________________

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Anatomy and Structure	**Desirable Characteristics**	**Undesirable Characteristics**
Cannon	16. ____________	Round and lacking substance; too long in comparison to forearm
Fetlock	17. ____________	Thick, coarse, round
Pastern	Springy; length in correlation with well-sloped shoulder	18. ____________
Feet	Large enough to support body; front usually larger than hind	19. ____________

OBJECTIVE 3

Explain the system of examination and characteristics for judging. Explain the system in the blanks provided.

VIEWING FROM THE SIDE

May be photocopied for student use.

VIEWING FROM THE FRONT

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____

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VIEWING FROM THE REAR

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VIEWING THE HORSE WHILE TRAVELING

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May be photocopied for student use.

VIEWING AT CLOSE INSPECTION

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____

OBJECTIVE 4

Select from a list common unsoundnesses of feet and legs. Place an "X" in front of common unsoundnesses of feet and legs.

_____ 1. Ringbone

_____ 2. Corns

_____ 3. Bowed tendon

_____ 4. Scars

_____ 5. Bone spavin

_____ 6. Laminitis

_____ 7. Blisters

_____ 8. Capped hocks, knees, elbows

_____ 9. Muscular disease

_____ 10. Sidebone

_____ 11. Splint

_____ 12. Water on the knee

_____ 13. Stifled

_____ 14. Osselets

_____ 15. Navicular disease

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OBJECTIVE 5

Match structural defects which commonly cause unsoundness to their description. Place the correct letter in the blank.

A. Calf-kneed
B. Cow-hocked
C. Sickle-hocked
D. Pigeon-toed
E. Splay-kneed
F. Sickle-hocked
G. Splay-toed
H. Buck-kneed
I. Bench-kneed
J. Pigeon-hocked
K. Splay-footed
L. Knock-kneed or bow-kneed

_____ 1. When viewed from the rear, toes turn out and hocks turn inward

_____ 2. Toes turned inward

_____ 3. Toes turned outward

_____ 4. When viewed from the front, cannons fail to meet center of knees

_____ 5. When viewed from the side, knees are bent forward

_____ 6. When viewed from the side, knees bend backward

_____ 7. Legs stand in at knees or too close at knees

_____ 8. When viewed from the side, hind legs extend too far under the horse with too much bend at the hocks

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OBJECTIVE 6

Complete a chart on evaluation of unsoundness and defects. Complete the following chart by placing an "X" in the appropriate boxes.

Unsoundness or Defect	**Disqualification**	**Discrimination**	**Serious Discrimination**
Blindness			
Bone spavin			
Capped hock			
Filled hocks			
Bog spavin			
Cocked ankles			
Hip down			
Undershot mouth			
Parrot mouth			
Stifled			
Bowed tendon			
Cracked feet			
Broken wind			
Curb			
Stringhalt			

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OBJECTIVE 7

List important factors to consider in taking notes for oral reasons. Write important factors in the blanks provided.

1. ______________________________

____

2. ______________________________

____

OBJECTIVE 8

List important items to consider when organizing reasons for presentation. Write important items in the blanks provided.

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________
6. ______________________________
7. ______________________________

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OBJECTIVE 9 **Discuss techniques for delivering reasons.** Discuss techniques in the blanks provided.

OBJECTIVE 10 **Evaluated on Assignment Sheet 1.**

OBJECTIVE 11 **Evaluated on Assignment Sheet 2.**

OBJECTIVE 12 **Evaluated on Assignment Sheet 3.**

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FORM FOLLOWS FUNCTION

Just as a car depends on many different parts in order to run properly, the horse also depends on the interaction of its parts to function properly. The parts of a horse "fit together" to enable the horse to function. For example, the way a horse moves depends on much more than just its feet. The phrase "form follows function" has importance to anyone involved in the equine industry. Because horses are valued for their performance, judging is not limited to those involved with horse shows.

The ability to judge horses is needed not only by individuals involved in showing horses but also by anyone involved with horses. A horse's conformation affects its ability to perform. Horses are valued for their ability to perform whether it be a hunter-jumper show horse or a horse that is used for an occasional ride in the pasture.

The three examples shown below illustrate the need for individuals involved with horses to be able to judge.

Joan is a member of an equine judging team. She has been around horses for quite a while but this is her first year judging. Much of what Joan is learning from being on the judging team she already was familiar with from working with horses. She realizes that what she considered "common sense" is good equine judging.

Marvin is a trainer who works with race horses. He is well respected and individuals come to him for advice concerning race horses. He has trained several horses for Jim and Carol Jones. They are considering purchasing a filly who is a race prospect and want Marvin to be the trainer. They want Marvin's opinion on the filly.

Jill Peterson is considering purchasing a show horse for her 14-year-old daughter. The daughter enjoys showing and has won several youth awards on her current horse. The daughter would like to purchase a horse that will do well in shows. Although her current horse has done well, the daughter is ready for a more advanced horse.

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LAP
SHEET

TRANSPORTING THE HORSE

F1

Check the blank as you complete each step.

1. **Take** ___ the pretest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.
2. **Read** ___ the introduction, unit objective, and specific objectives.
3. **Do** ___ the focus assignments.
4. **Stop** ___ and have your instructor evaluate your work from the focus assignment. After your work has been evaluated, follow your instructor's recommendations.
5. **Study** ___ the Information Sheet, objectives 1-6.

Optional: Watch ___ the video *Leading and Loading Safely* or the video *Bandaging Techniques for Horses.*

6. **Ask** ___ your instructor to demonstrate the guidelines and procedures in Job Sheet 1. Use the Job Sheet to follow along. Pay careful attention to any guidelines, cautions, and warnings.
7. **Practice** ___ the procedures demonstrated by your instructor. Use the Job Sheet as a guide. Notify your instructor when you are ready to perform the procedures for evaluation.
8. **Stop** ___ and have your instructor evaluate your work from the Job Sheet. After your work has been evaluated, follow your instructor's recommendations.
9. **Ask** ___ your instructor to demonstrate the guidelines and procedures in Job Sheet 2. Use the Job Sheet to follow along. Pay careful attention to any guidelines, cautions, and warnings.

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10. **Practice** ___ the procedures demonstrated by your instructor. Use the Job Sheet as a guide. Notify your instructor when you are ready to perform the procedures for evaluation.

11. **Stop** ___ and have your instructor evaluate your work from the Job Sheet. After your work has been evaluated, follow your instructor's recommendations.

12. **Ask** ___ your instructor to demonstrate the guidelines and procedures in Job Sheet 3. Use the Job Sheet to follow along. Pay careful attention to any guidelines, cautions, and warnings.

13. **Practice** ___ the procedures demonstrated by your instructor. Use the Job Sheet as a guide. Notify your instructor when you are ready to perform the procedures for evaluation.

14. **Stop** ___ and have your instructor evaluate your work from the Job Sheet. After your work has been evaluated, follow your instructor's recommendations.

15. **Take** ___ the posttest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.

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WRITTEN TEST

TRANSPORTING THE HORSE

F1

Name ______________________ Score __________

OBJECTIVE 1

List ways to transport the horse. Write the five ways to transport a horse in the blanks provided.

1. ______________________
2. ______________________
3. ______________________
4. ______________________
5. ______________________

OBJECTIVE 2

Select from a list precautions to take before transporting the horse. Place an "X" in front of correct precautions.

____ 1. Possess the proper health papers and statement of ownership.

____ 2. Provide proper ventilation.

____ 3. Do NOT let the horse eat for 12 hours before transporting.

____ 4. Prepare the horse by wrapping its legs and tail.

____ 5. Have a veterinarian administer a tranquilizer if the horse has never been transported before.

____ 6. Do NOT transport horses if the temperature is below freezing.

____ 7. Control flies and other insects.

____ 8. Feed the horse lightly and give fresh, clean water to drink.

____ 9. Provide good footing.

____ 10. Blanket the horse if the weather requires.

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OBJECTIVE 3

List items of trailer maintenance. List the eight items in the blanks provided.

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________
6. ______________________________
7. ______________________________
8. ______________________________

OBJECTIVE 4

Discuss factors to consider while driving and transporting the horse.

____

____

____

____

____

____

May be photocopied for student use.

OBJECTIVE 5

Select from a list equipment needed for hauling. Place an "X" in front of equipment needed.

_____ 1. Halter with lead

_____ 2. Tack

_____ 3. Leg and tail wraps

_____ 4. Trailer and vehicle

_____ 5. Additional vehicle

_____ 6. Blanket or sheet

OBJECTIVE 6

List health requirements necessary for interstate travel. List the two health requirements in the blanks provided.

1. ____

2. ____

OBJECTIVE 7

Evaluated on Job Sheet 1.

OBJECTIVE 8

Evaluated on Job Sheet 2.

OBJECTIVE 9

Evaluated on Job Sheet 3.

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I KNEW NOT TO DO THAT

Case 1

Mr. Harris had found a pony for his eight-year-old daughter. He had been around horses but not for quite some time. He went to pick up the pony, borrowing a neighbor's trailer. The pony was very gentle and Mr. Harris was proud of his selection. But when he went to load the pony, it was reluctant to step into the trailer. Mr. Harris, figuring it was "just a pony" thought he could force the pony into the trailer. He took the lead rope, got in front of the pony and started pulling. The pony would not budge, so Mr. Harris started pulling harder. This did not work either. Mr. Harris was ready to forget the purchase and look for another pony.

Case 2

Jonathan was getting ready for a horse show. He was running late and was worried about finding the arena. He was showing a young mare in the halter class. He had just recently acquired the mare. The mare had not been loaded very often and was hesitant but usually went in with little trouble. When Jonathan went to load the mare, the mare hesitated briefly and was smelling the inside of the trailer. Jonathan started yelling at the mare and swatting her on the rump. The mare became frightened and started rearing back.

Case 3

Jane was excited about the trail ride she was getting ready to go on. Her gelding was an excellent trail horse and she had not been able to go on trail rides recently. She got so busy packing and preparing for the trail ride, she overlooked checking the trailer. By the time she remembered she was running late and figured it should be fine since it was used less than two weeks ago. Halfway to her destination, she stopped at a rest stop. While walking around the trailer to check on her horse, she noticed that one of the tires was very low. She was upset but figured it would not take long to change the tire. She went to get the spare and was dismayed to find it was not there.

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LAP SHEET

PHYSICAL FACILITIES AND STABLE MANAGEMENT

G1

Check the blank as you complete each step.

1. **Take** ___ the pretest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.

2. **Read** ___ the introduction, unit objective, and specific objectives.

3. **Do** ___ the focus assignments.

4. **Stop** ___ and have your instructor evaluate your work from the focus assignment. After your work has been evaluated, follow your instructor's recommendations.

5. **Study** ___ the Information Sheet, objectives 1-9.

Optional: Watch ___ the video *Facility Considerations for Horse Farms.*

6. **Do** ___ Assignment Sheet 1.

7. **Stop** ___ and have your instructor evaluate your work from the Assignment Sheet. After your work has been evaluated, follow your instructor's recommendations.

8. **Study** ___ the Information Sheet, objectives 11-12.

9. **Do** ___ Assignment Sheet 2.

7. **Stop** ___ and have your instructor evaluate your work from the Assignment Sheet. After your work has been evaluated, follow your instructor's recommendations.

13. **Take** ___ the posttest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.

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WRITTEN TEST

PHYSICAL FACILITIES AND STABLE MANAGEMENT

G1

Name ______________________________ Score __________

OBJECTIVE 1

List steps in planning a facility. Write the four steps in the blanks provided.

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________

OBJECTIVE 2

List factors to consider in the location of the facility. Write the factors to consider in the blanks provided.

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________
6. ______________________________
7. ______________________________

May be photocopied for student use.

OBJECTIVE 3

List factors to consider in the design and construction of a facility. Write the considerations in the blanks provided.

1. ____________________
2. ____________________
3. ____________________
4. ____________________
5. ____________________
6. ____________________
7. ____________________
8. ____________________
9. ____________________
10. ____________________
11. ____________________
12. ____________________

OBJECTIVE 4

Describe recommended environmental conditions for mature horses. Describe recommended conditions in the blanks provided.

____

____

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____

____

May be photocopied for student use.

OBJECTIVE 5

Complete a chart on recommended stall sizes. Complete the chart below.

TYPE OF HORSE	STALL SIZE
Riding horses	
Stallions	
Weanlings	
Yearlings	
Foaling	
Isolation	

OBJECTIVE 6

Select from a list characteristics of stall construction. Place an "X" in front of correct answers.

_____ 1. Walls constructed of strong and safe materials

_____ 2. No wind or air circulation in stall

_____ 3. Partitions 5 feet high; lower 3 feet of partition solid

_____ 4. Floor of stall of firm soil

_____ 5. Corner supports of steel or pressure-treated wood

_____ 6. Proper light and ventilation

_____ 7. Waterers, feed troughs and hay mangers where most convenient to refill

_____ 8. Partitions 7 feet high; lower 4 feet of partition solid

_____ 9. Convenient and safe

_____ 10. Walls constructed of material that will give or bend if struck

_____ 11. Waterers, feed troughs, and hay mangers located so they will not be a safety hazard

_____ 12. Built as inexpensively as possible

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OBJECTIVE 7

Select from a list conditions which determine the storage space requirements for feed and bedding. Place an "X" in front of correct answers.

____ 1. Method of feeding

____ 2. Amount of feed raised versus amount purchased

____ 3. Time of feeding

____ 4. Number of horses to feed

____ 5. Length of pasture season

____ 6. Cost of feed

____ 7. Amount of available pasture

____ 8. Rodent problems

____ 9. Kind of feed

____ 10. Climate

OBJECTIVE 8

Select from a list types of bedding. Place an "X" in front of correct answers.

____ 1. Cotton fibers

____ 2. Straw

____ 3. Sand

____ 4. Sawdust

____ 5. Wood shavings

____ 6. Fine pebbles

____ 7. Grass

____ 8. Alfalfa hay

____ 9. Peat moss

____ 10. Ground cobs

May be photocopied for student use.

OBJECTIVE 9

Describe sanitation requirements of horse facilities. Describe sanitation requirements in the blanks provided.

____

____

____

____

____

____

____

____

OBJECTIVE 10

Evaluated on Assignment Sheet 1.

OBJECTIVE 11

List types of fences used for horses. Write the types of fences in the blanks provided.

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________
6. ______________________________
7. ______________________________
8. ______________________________

May be photocopied for student use.

OBJECTIVE 12

List advantages of good fences. Write the advantages in the blanks provided.

1. ______________________________

2. ______________________________

3. ______________________________

4. ______________________________

5. ______________________________

6. ______________________________

OBJECTIVE 13

Evaluated on Assignment Sheet 2.

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HANDOUT

DIFFERENT NEEDS, DIFFERENT FACILITIES

Case 1

Jack and Terri run a stables in a large metropolitan area. They offer riding lessons and also board horses. The stables have a large indoor riding arena for teaching and also for use by individuals boarding their horses. They have stalls for 25 horses, most of which are 12 X 12. The stables have a large tack room. They have several paddocks, a large pasture, and an outdoor riding arena. They have fenced off several areas so that many of the horses can be outside. They must also keep the facilities looking attractive and well kept for visitors and potential customers.

Case 2

Barbara has two horses which she rides for recreation. She has the horses on ten acres. The land originally had barbed wire and Barbara replaced the barbed-wire with smooth wire. The horses have a wood lean-to barn where they can go for shelter. Although the lean-to is not very attractive, it is sturdy. The barn does not have any storage space for hay, feed, or tack. Barbara keeps the hay and feed in a friend's barn that is by the ten acres. She keeps most of her tack in her garage. She uses her pick-up to haul the hay, feed, and tack.

Case 3

Tim owns a breeding farm and has both stallions and mares on the farm. He has two stables that can both house up to 15 horses. The stalls and paddocks where he keeps stallions are sturdy and durable. He also has several larger stalls that are used for foaling. One of the stables has a large breeding shed that has office and work space for the veterinarian, hot water facilities, and stalls for preparing mares for breeding. Tim has two full-time employees who help care for the horses and take care of the facilities.

May be photocopied for student use.

Date: ________________

Plans and Building Information Service
214 Agricultural Hall
Oklahoma State University
Stillwater, OK 74078-0469

To Plans and Building Information Service:

I teach the *Equine Management and Production* course at

____. The course has a unit on physical facilities and stable management. I would like to obtain sample plans of horse facilities to aid in teaching this unit. I understand that I may copy these plans and distribute them to my students. Thank you for your assistance. Please send sample plans to:

Sincerely,

LAP
SHEET

SELECTION AND CARE OF TACK AND EQUIPMENT

H1

Check the blank as you complete each step.

1. **Take** ___ the pretest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.

2. **Read** ___ the introduction, unit objective, and specific objectives.

3. **Do** ___ the focus assignments.

4. **Stop** ___ and have your instructor evaluate your work from the focus assignment. After your work has been evaluated, follow your instructor's recommendations.

5. **Study** ___ the Information Sheet, objectives 1-9.

Optional: Identify ___ different types of tack and equipment in current equine tack and equipment catalogs.

Optional: Identify ___ parts of different tack on actual pieces of tack.

6. **Ask** ___ your instructor to demonstrate the guidelines and procedures in the Job Sheet. Use the Job Sheet to follow along. Pay careful attention to any guidelines, cautions, and warnings.

7. **Practice** ___ the procedures demonstrated by your instructor. Use the Job Sheet as a guide. Notify your instructor when you are ready to perform the procedures for evaluation.

8. **Stop** ___ and have your instructor evaluate your work from the Job Sheet. After your work has been evaluated, follow your instructor's recommendations.

9. **Take** ___ the posttest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.

May be photocopied for student use.

WRITTEN TEST

SELECTION AND CARE OF TACK AND EQUIPMENT

H1

Name ______________________________ Score __________

OBJECTIVE 1

List basic tack and equipment. Write basic tack and equipment in the blanks provided.

TACK

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________
6. ______________________________

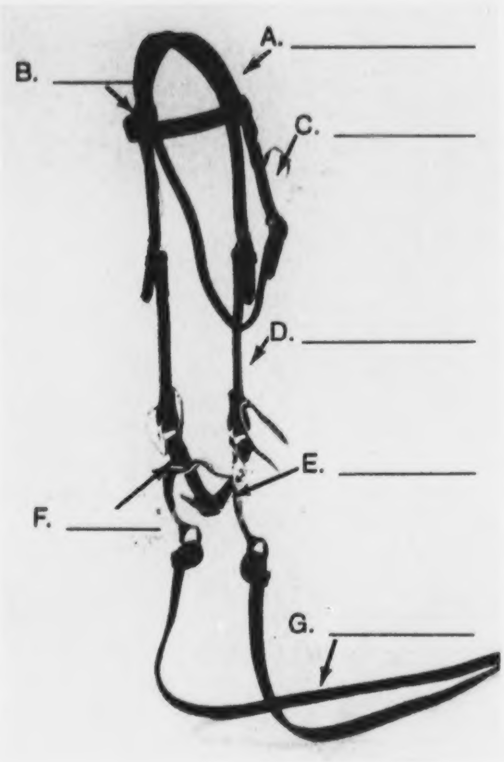
EQUIPMENT

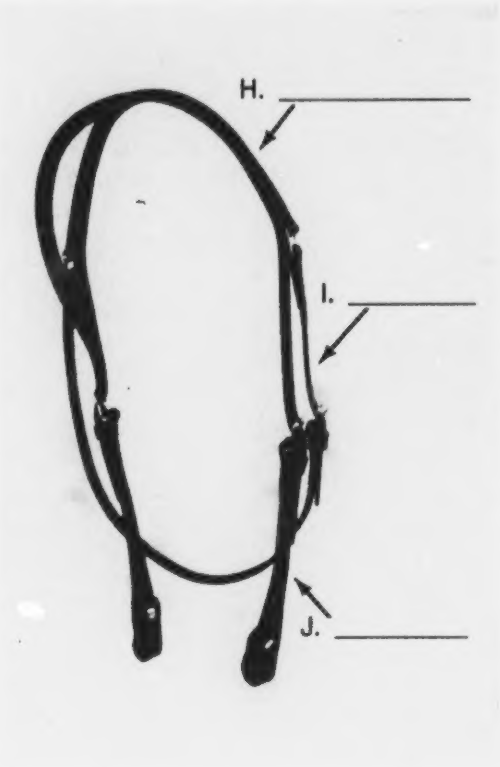
7. ______________________________
8. ______________________________
9. ______________________________
10. ______________________________
11. ______________________________
12. ______________________________
13. ______________________________
14. ______________________________
15. ______________________________

May be photocopied for student use.

OBJECTIVE 2

Label parts of the Western bridle. Write the names of the parts in the blanks provided.





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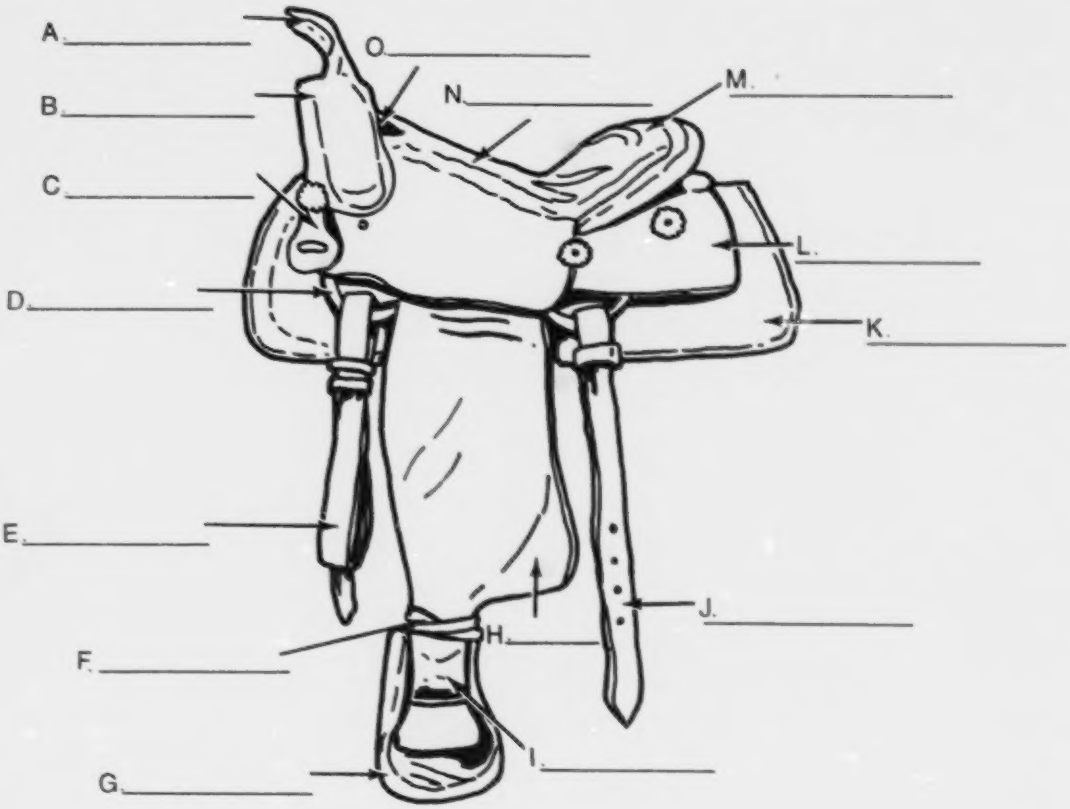
OBJECTIVE 3 **Label parts of the Western saddle.** Write the names of the parts in the blanks provided.



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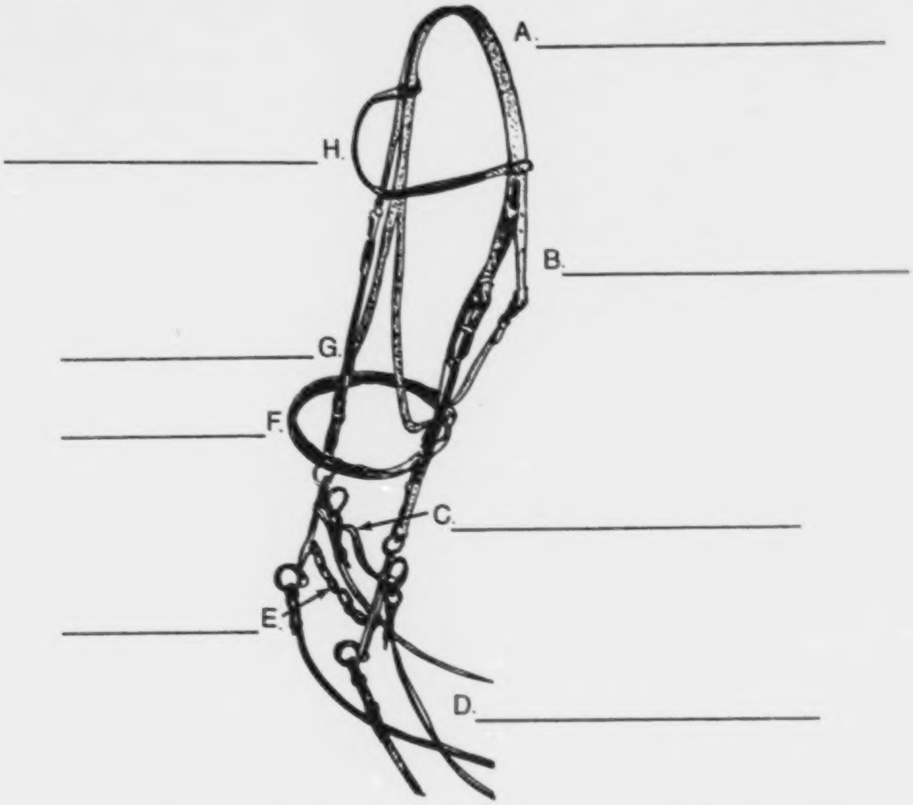
OBJECTIVE 4

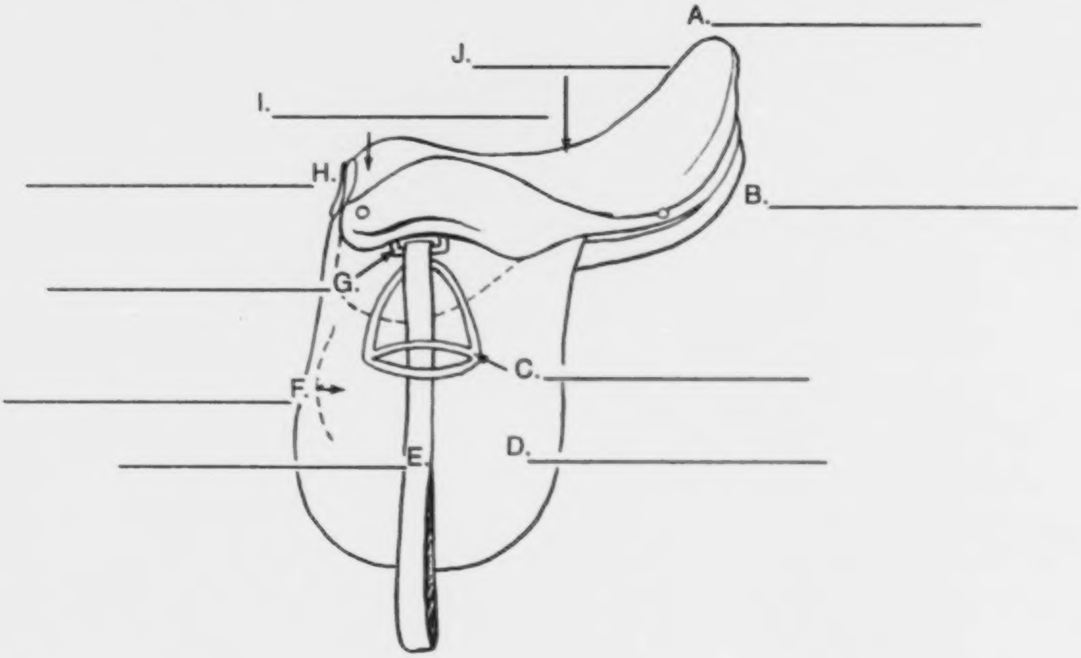
Label parts of the English bridle. Write the names of the parts in the blanks provided.



616

May be photocopied for student use.

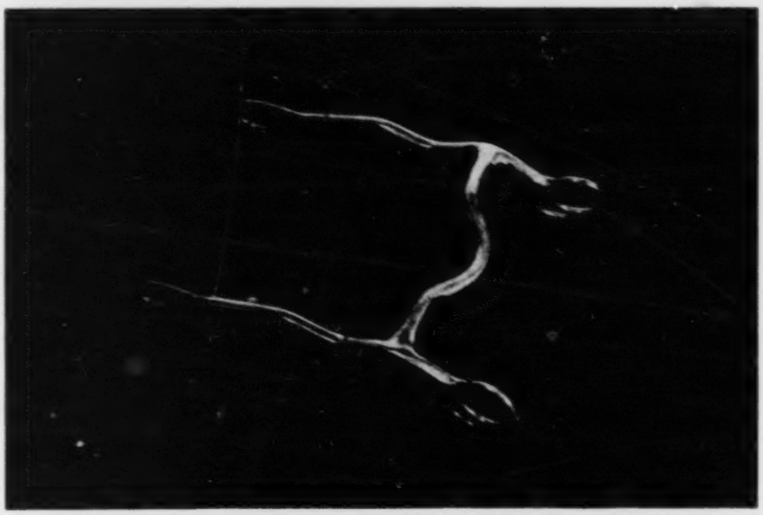
OBJECTIVE 5 **Label parts of the English saddle.** Write the names of the parts in the blanks provided.



May be photocopied for student use.

OBJECTIVE 6

Identify types of bits. Write the names of the types of bits in the blanks provided.



1. ____________________

2. ____________________

618

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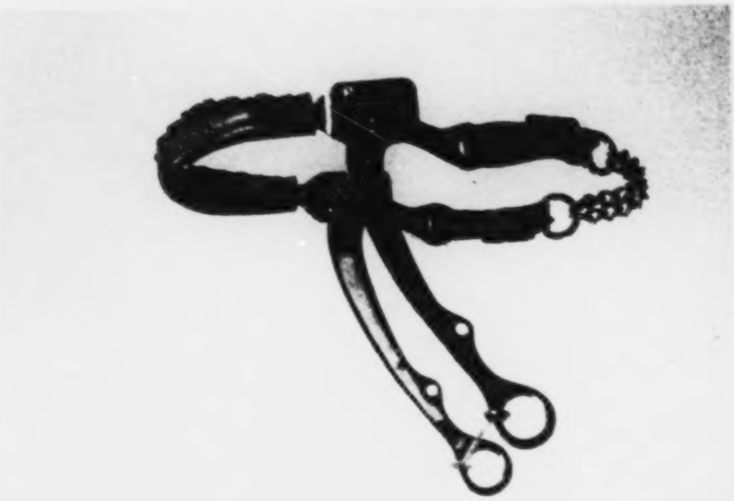
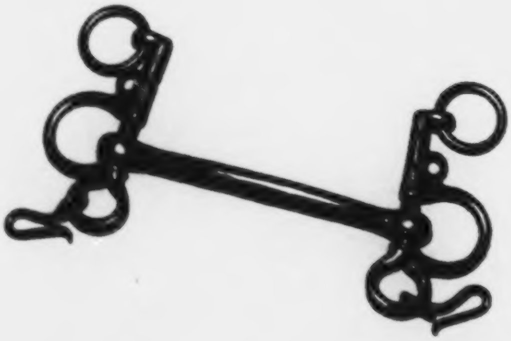


3. ______________



4. ______________

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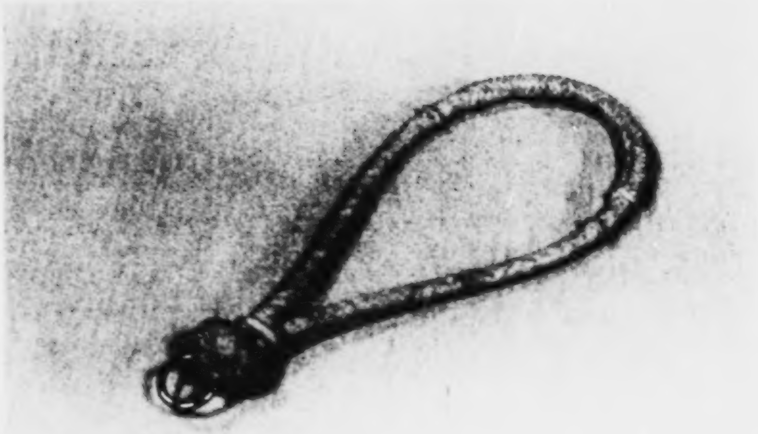
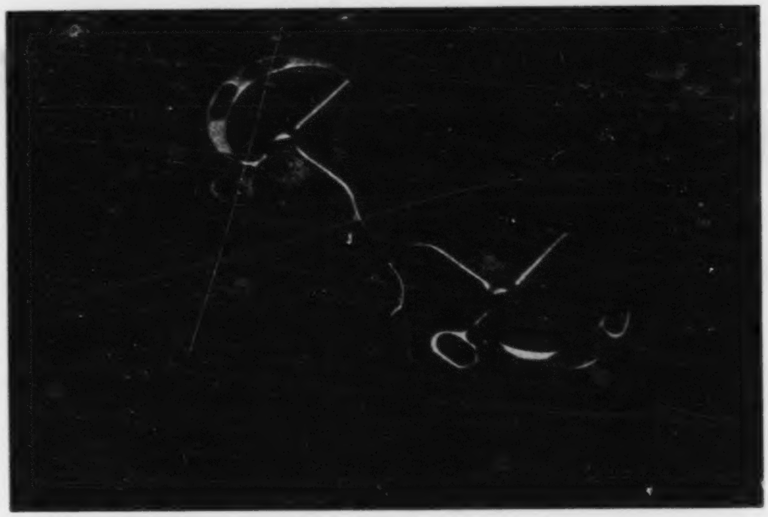


5. ____________________

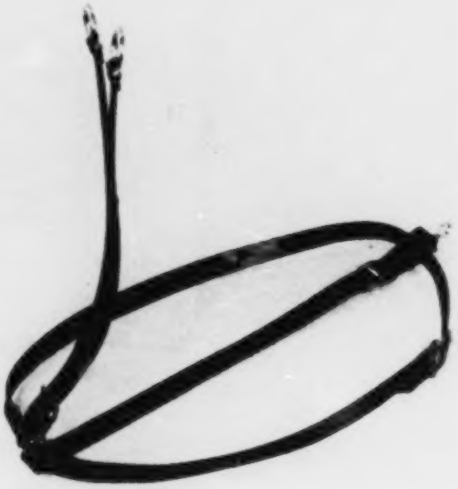


6. ____________________

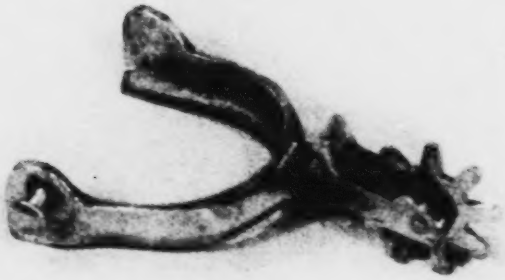
May be photocopied for student use.

OBJECTIVE 7

Identify artificial riding aids. Write the names of the artificial riding aids in the blanks provided.



1. ____________________



2. ____________________

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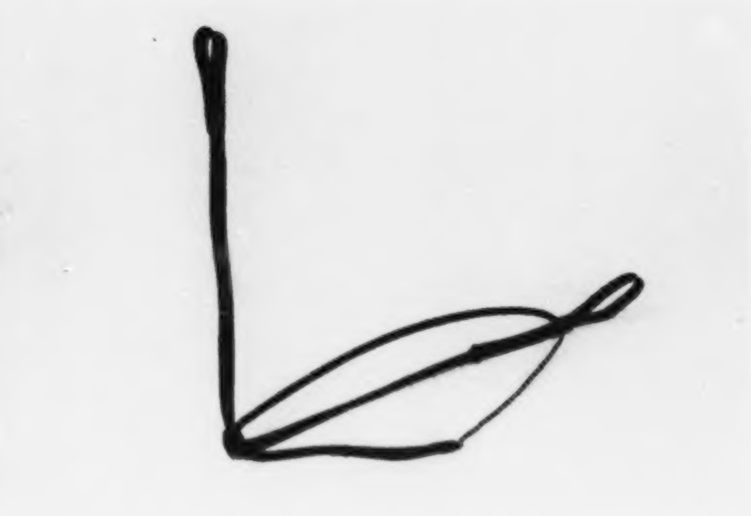
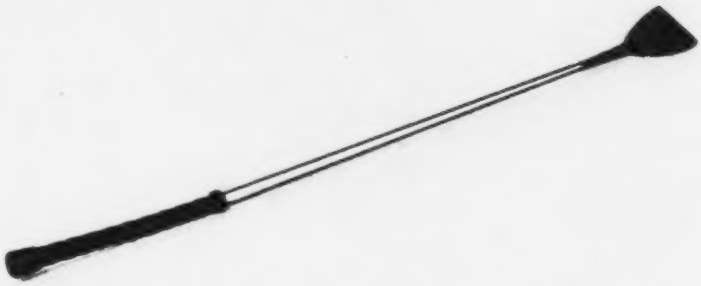


3. ____________________



4. ____________________

6~2

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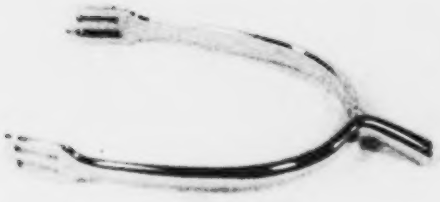

5. ____________________

May be photocopied for student use.

OBJECTIVE 8 **Describe basic care of tack and equipment.** Describe basic care of tack and equipment in the blanks provided.

OBJECTIVE 9 **Describe ways to store saddles and bridles.** Describe ways to store saddles and bridles in the blanks provided.

OBJECTIVE 10 **Evaluated on the Job Sheet.**

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DIFFERENT TACK FOR DIFFERENT USES

There are many different types of tack. Tack has been adapted for many specific uses but the two main categories of tack are English and Western.

Both English and Western tack have many variations. The Western saddle has been adapted for specialized uses such as roping and barrel racing. The English saddle has been adapted for uses such as dressage and racing. The racing saddle is an extreme form of the English saddle; it must be lightweight yet sturdy.

In addition to saddles there are many other items of tack such as bridles and artificial riding aids. Equine specialties such as harness racing, endurance riding, and polo demand specialized tack and equipment. Each area of equine specialty has unique tack. For example, racing tack includes items such as blinkers, racing martingales, and shadow rolls.

The tack business is a large part of the equine industry. Many individuals are involved in the tack business such as manufacturers, retailers and consumers.

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Equine Management and Production

Student Workbook

Developed by the
Curriculum and Instructional Materials Center
for the Division of Agricultural Education
Oklahoma Department of Vocational and Technical Education

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Curriculum and Instructional Materials Center

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OBJECTIVE SHEET

THE EQUINE INDUSTRY A1

INTRODUCTION

The equine industry is a multimillion dollar business that impacts many individuals, from the racehorse jockey to the checker at the feed store. The equine industry includes much more than horses – it encompasses feed, tack and equipment, publications, management, veterinary care, advertising, clothing, education, and many other fields that are either directly or indirectly affected by the equine industry.

PREREQUISITES

None

FOCUS ASSIGNMENTS

Reading Comprehension
- Gain factual information
- Analyze cause and effect
- Draw conclusions

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition
- Use complete sentences

FOCUS ASSIGNMENTS

PREREADING:	Read the Handout *Horse Business is Big Business*. As you read, think about the aspects of the equine industry that are not obvious and the impact the equine industry has on the economy.
WRITING:	Write a short (one paragraph) summary of how you believe the equine industry affects the location where you live.

UNIT OBJECTIVE

After completing this unit, you will show the following competencies by mastering the activities on the Assignment Sheets and by scoring at least 85% on the Written Test.

SPECIFIC OBJECTIVES

1. Match stages of evolutionary development of the horse to their descriptions.
2. Match terms related to basic horse terminology to their definitions.
3. List five ways horses can be used.
4. Identify the five common horse breeds in the state.
5. Write a letter to a breed association requesting information on that breed. (Assignment Sheet 1)
6. Describe three job opportunities in the equine industry that interest you.
7. Complete a career search form. (Assignment Sheet 2)

INFORMATION SHEET

THE EQUINE INDUSTRY

A1

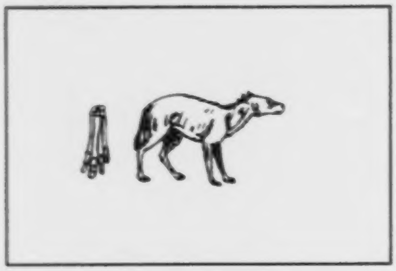
OBJECTIVE 1

Optional Activities/ Resources in Instructor's Guide

Match stages of evolutionary development of the horse to their descriptions.

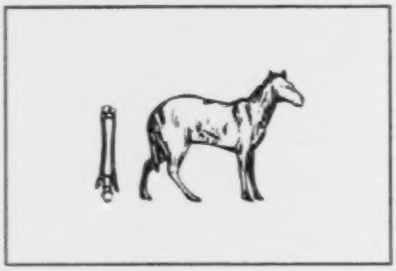
- **Eohippus** – 10"-12" high, swamp-roaming animal with even teeth, slender legs, and short neck; front foot had four toes and rear foot had three toes; 58 to 38 million years ago (Figure 1)

FIGURE 1



- **Mesohippus** – about the size of a collie dog with conformation similar to a deer; teeth and jaws slightly larger; front and rear feet had three toes with the middle ones more pronounced; 38 to 28 million years ago (Figure 2)

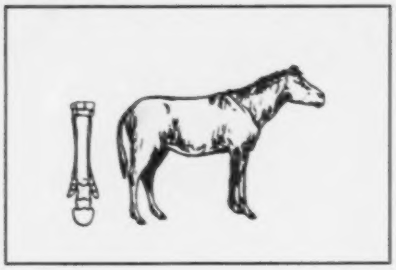
FIGURE 2



Illustrations above used by permission of Equine Research, Inc. from *Conditioning to Win* by Don M. Wagoner, ed., copyright 1974, p.15.

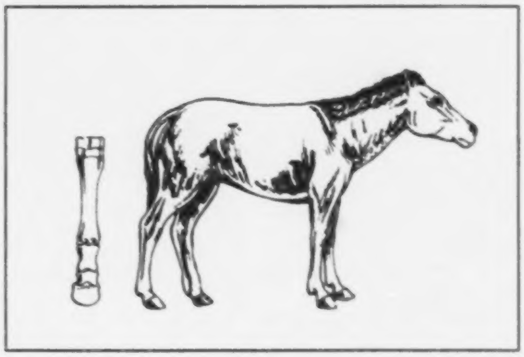
- **Merychippus** – approximate size of a small pony; became plains dweller as the central toe enlarged and carried all the weight; 28 to 12 million years ago (Figure 3)

FIGURE 3



- **Pliohippus** – about the size of a donkey with one toe called a hoof; versatility and visibility greatly increased; 12 to 1 million years ago (Figure 4)

FIGURE 4



Illustrations above used by permission of Equine Research, Inc. from *Conditioning to Win* by Don M. Wagoner, ed., copyright 1974, p.15.

- **Equus Caballus** – size, intelligence, and speed increased into our "modern day horse"; 0 to 1 million years ago (Figure 5)

FIGURE 5

OBJECTIVE 2

Optional Activities/
Resources in
Instructor's Guide

Match terms related to basic horse terminology to their definitions.

WORDS YOU SHOULD KNOW	
castration	removal of the testicles of a male to make him sterile

- **breed** – animals related by descent from common ancestors and visibly similar in most characteristics
- **colt** – a young stallion

☑ **NOTE:** Breed associations have varying regulations on ages. For example, a colt may be defined as under three years of age or under four years of age depending on the association.

- **cryptorchid** – a stallion with one or both testicles retained in the abdomen

- **dam** – female parent

- **filly** – a young mare

  ☑ **NOTE:** Breed associations have varying regulations on ages.

- **foal** – horse under one year of age

- **gelding** – male horse which has been castrated

- **hand** – standard measurement of a horse; four inches

- **mare** – mature female horse

- **near side** – left side of a horse

- **off side** – right side of a horse

- **sire** – male parent

- **stallion** – mature male horse that has not been castrated

- **weanling** – a weaned foal before becoming a yearling

- **withers** – area between the mane and the back over the shoulders

- **yearling** – horse that is one year of age

  ☑ **NOTE:** All horses are aged as of January 1. A foal born in the spring becomes a "yearling" the following January 1.

OBJECTIVE 3

Optional Activities/
Resources in
Instructor's Guide

List five ways horses can be used.

- Pleasure or recreation

- Show

- Racing

- Rodeo, trail, and sports events

- Work

OBJECTIVE 4

Required Activities/
Resources
– Slide set

Optional Activities/
Resources in
Instructor's Guide

Identify the five common horse breeds in the state.

You will see five slides showing the most common horse breeds in the state.

Your instructor will show five slides of the most common horse breeds. Write the breeds in the blanks below.

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________

OBJECTIVE 5

Complete Assignment Sheet 1.

OBJECTIVE 6

Required Activities/
Resources
– Video
– Discussion

Optional Activities/
Resources in
Instructor's Guide

Describe three job opportunities in the equine industry that interest you.

You will see the video *Unbridled Opportunities: Careers in the Horse Industry.*

Start the discussion by asking the question "What are some of the job opportunities in the equine industry?"

Your instructor will show the video *Unbridled Opportunities: Careers in the Horse Industry.* You should determine three job opportunities in the equine industry that interest you. Pay special attention to jobs that are not the obvious ones found in the equine industry. Write the three job opportunities and a brief description of them in the blanks provided.

1. ______________________________
____
____
____
____

2. ____

____

____

____

____

3. ____

____

____

____

____

OBJECTIVE 7 **Complete Assignment Sheet 2.**

637

ASSIGNMENT SHEET 1

THE EQUINE INDUSTRY

A1

Name ______________________________ Score __________

OBJECTIVE 5

Write a letter to a breed association requesting information on that breed.

EQUIPMENT AND SUPPLIES

- Handout on breed associations

INSTRUCTIONS

Reading Comprehension
- Gain factual information

Functional Reading
- Follow written instructions

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition
- Use complete sentences

Functional Writing
- Write letters

Part 1

Using the Handout on breed associations, choose one which interests you. Write a letter to that breed association requesting information. Be sure to use correct grammar and spelling. Turn the letter in to your instructor.

Part 2

Your instructor will divide your class into groups according to the breed association you selected for your letter. Each group of students that wrote to the same breed will vote on the best letter. When you vote, consider spelling, grammar, and clarity. After voting on the best letter, turn the letters back to the instructor indicating which letter your group chose. Your instructor will then send the letter to the breed association.

ASSIGNMENT SHEET 2

THE EQUINE INDUSTRY

A1

Name ______________________________ Score __________

OBJECTIVE 7

Complete a career search form.

EQUIPMENT AND SUPPLIES

- Computer
- *Career Search* software program

☑ **NOTE:** This software should be available through the school's resource or guidance center.

INSTRUCTIONS

Research and Reference
- Use computer data base

Functional Reading
- Follow written instructions

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition
- Use complete sentences

Part 1

Ask your instructor for access to the *Career Search* software and for instructions on using the software. Select careers that you might be interested in that could be related to the equine industry. Several examples are given below:

- Veterinarian – specializes in equine medicine
- Writer and Editor – writes for a breed association magazine
- Commercial Artist – works for an equine publishing company
- Animal Caretaker – works in a stables or on a farm/ranch
- Sales – works for a feed supplier

Look at other careers and determine if the careers are needed in the equine industry. Look beyond the obvious careers and think about how other careers might fit in the equine industry.

Part 2

Select two occupational areas that are of interest to you. For example, you might choose veterinarian and sales. Answer the questions that follow.

1. List two occupational areas that are of interest to you.

____

____

2. Why do these areas interest you?

____

____

____

____

3. What advantages and disadvantages do these occupational areas offer?

____

____

____

____

____

____

____

640

OBJECTIVE SHEET

SAFETY

A2

INTRODUCTION

Safety must always be considered when working with horses – both the safety of the horse and of the individuals around the horse are important. Many accidents and injuries can be avoided if correct safety and management practices are followed. Learning the behaviors of horses, safety practices when handling horses, and safety practices concerning where horses are kept will lessen the chances of a horse or person being injured.

PREREQUISITES

None

FOCUS ASSIGNMENTS

Reading Comprehension
- Gain factual information
- Analyze cause and effect
- Draw conclusions

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition
- Use complete sentences

FOCUS ASSIGNMENTS

PREREADING:	Read the Handout *Young Boy Seriously Injured in Horse Mishap.* As you read pay special attention to what the young boy did incorrectly.
WRITING:	Write a short (one paragraph) discussion of what the young boy did incorrectly. State how you believe the accident might have been avoided.

UNIT OBJECTIVE

After completing this unit, you will show the following competencies by mastering the activities on the Assignment and Job Sheets and by scoring 100% on the Written Test.

SPECIFIC OBJECTIVES

1. Describe the senses of the horse.
2. Describe general temperament types of horses.
3. Match horse behaviors to their descriptions.
4. Discuss the body language of horses.
5. List the types of horse vices and give three examples of each.
6. List the reasons for vices.
7. Analyze descriptions involving horse behavior and body language. (Assignment Sheet 1)
8. Describe appropriate dress for working around horses.
9. Distinguish between safe and unsafe practices when approaching a horse.
10. Distinguish between safe and unsafe practices when handling the horse.
11. Describe safe practices when leading the horse.
12. Describe safe practices when tying the horse.
13. Tie a quick release knot. (Job Sheet)
14. Explain safety procedures in the horse barn or facility.
15. Explain safety procedures in the corral, paddock and pasture.
16. List types of restraints.
17. Describe safety considerations when restraining horses.
18. Analyze horse handling procedures for correct and incorrect safety practices. (Assignment Sheet 2)
19. Describe legal and ethical obligations for reporting mistreatment of horses.
20. Analyze scenarios of reporting abuse and neglect of horses. (Assignment Sheet 3)

OBJECTIVE 1

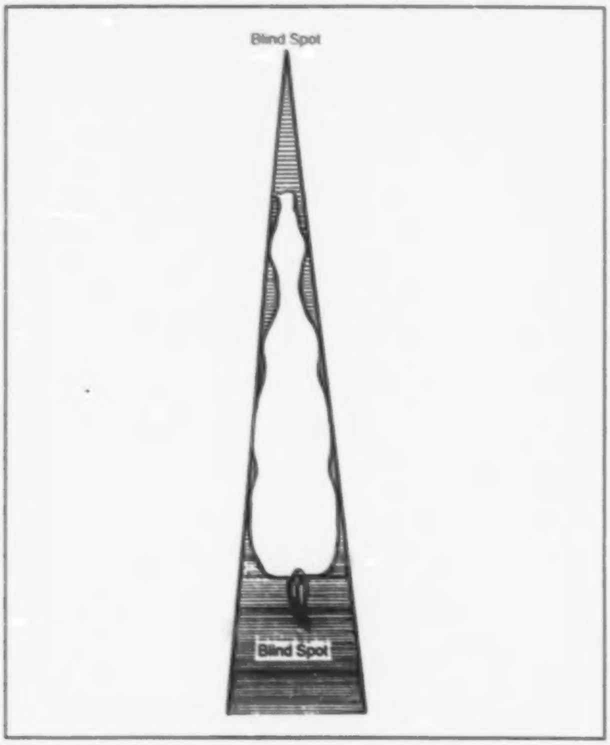
Required Activities/
Resources
– Transparency Master

Optional Activities/
Resources in
Instructor's Guide

Describe the senses of the horse.

- **vision** – poor vision due to wide forehead, eyes perched laterally, and retina more concave in some places than others (Figure 1)

FIGURE 1



- **hearing** – very good, superior to human's, due to shape of ears, ability to rotate ears, and ability to detect ground vibrations
- **smell** – good sense of smell; used to become familiar with strange objects, food, and, by stallion, to detect mare in heat
- **taste** – horses can differentiate tastes; less developed than other senses
- **touch** – skin highly specialized sensory organ; most sensitive in areas of mouth, feet, flanks, neck, and shoulders

OBJECTIVE 2

Optional Activities/
Resources in
Instructor's Guide

Describe general temperament types of horses.

☑ **NOTE:** There are many variations of the different temperament types.

- **good-natured placid** – The good-natured placid horse is quiet and somewhat sluggish with little interest in its surroundings. It is generally safe for beginners but does not often become highly-trained.

- **good-natured interested** – This type of horse is interested in its surroundings and pays attention to what is going on around it; it is agreeable and responds well.

  ☑ **NOTE:** The good-natured interested horse is the most desirable temperament.

- **nervous** – The nervous horse is easily excitable and shies away from strange objects, movement, and noise.

  ☑ **NOTE:** Nervous horses are safe for experienced horsepeople and are capable of reaching a highly-trained state. Nervous dispositions will improve as these horses get older and gain experience.

- **stubborn** – The stubborn horse is difficult to train to be obedient, is slow to learn obedience, and requires tact and patience by the trainer.

- **spoiled** – The spoiled horse is accustomed to being treated in a certain manner and may react negatively to being treated differently than it is used to.

- **bad-tempered** – Bad-tempered horses are resentful and often have vices such as biting. They often lay their ears back and bare their teeth. Bad-tempered horses can be divided into two types, based on underlying motivation: horses that behave negatively because they have been severely or chronically abused or horses that have learned to behave in this manner to get their way.

OBJECTIVE 3

Optional Activities/
Resources in
Instructor's Guide

Match horse behaviors to their descriptions.

- **agonistic** – includes all actions that are a result of or associated with conflict or fighting

  ☑ **NOTE:** Includes aggression, submission, and attempts to escape.

- **allelomimetic** – mimicry

  ☑ **NOTE:** Horses will copy undesired behavior such as cribbing or being difficult to catch.

- **contactual** – behavior generally considered the result of seeking affection or protection
- **dominance** – characterized by "pecking orders" which range from most dominant down to most submissive
- **eliminative** – elimination of waste by defecation or urination
- **epimeletic** – giving of care and attention between horses

  ☑ **NOTE:** Includes mutual grooming and mare-foal relationships.

- **et-epimeletic** – signaling for care and attention

  ☑ **NOTE:** Exhibited by calling or movement by horses when separated from each other.

- **grooming** – behavior associated with maintaining the horse's hair coat
- **ingestive** – taking of food or water into the digestive tract
- **investigative** – sensory inspection of the environment which generally involves one or all of the horse's senses
- **learning** – behavior associated with learning certain tasks

  ☑ **NOTE:** A horse's experiences early in life will affect its ability to learn.

- **play** – behavior which the horse enjoys

  EXAMPLE: Foals running around a paddock

- **sexual** – all acts associated with the mating process

- **sleeping and waking** – acts which are necessary for the horse to function by getting proper rest

OBJECTIVE 4

Optional Activities/ Resources in Instructor's Guide

Discuss the body language of horses.

- **interested** – The horse is intensely focused on object or person of interest; ears will be alert, eyes bright, and focused forward.

- **playful/happy** – The horse is enjoying itself, will often raise its tail and flip its head up high.

- **eager** – The horse is impatient to begin an activity and will often stamp its front foot and then its back foot, shake its head, and move sideways.

- **proud** – The proud horse will have its ears forward, tail up, and will often flair its nostrils.

- **frightened** – The frightened horse will focus its attention on the object of concern, become tense, move around restlessly, and sniff the air.

    - If the horse is not reassured and becomes more frightened, it will begin to sweat, shiver, and turn its head looking for whatever is frightening it.

    - As the frightened horse becomes more afraid it will try to flee, and will sweat heavier, breathe heavily, and the whites of the eyes will be visible.

- **angry horse** – The horse will show its anger by laying its ears back, swishing its tail, and tensing the hindquarters; as the horse becomes more irritated, the ears will become pinned down.

- **bored horse** – The bored horse is often extremely mouthy, will mess around with items such as feed buckets, and may develop vices.

- **bereaved horse** – The bereaved horse is longing for a missed companion and is restless, will sniff the air for scent, nicker, and race up and down the fences.

  ☑ **NOTE:** A mare whose foal has been weaned before she was ready to wean it will become bereaved; horses will also miss companions such as other horses, owners, or even dogs.

- **horse in pain** – The horse in mild discomfort will often shrug the affected muscle, keep the weight off the sore foot or leg; the horse that is sick will become listless, less responsive, and will have a dull coat.

OBJECTIVE 5

Optional Activities/
Resources in
Instructor's Guide

List the types of horse vices and give three examples of each.

- **Aggressive vices** – vices directed toward the handler or another horse
  - ☐ kicking
  - ☐ biting
  - ☐ charging
  - ☐ bucking
  - ☐ striking
- **Flight responses**
  - ☐ rearing
  - ☐ balking
  - ☐ shying
  - ☐ pulling on halter
  - ☐ fleeing

- **Stall vices**
    - ☐ cribbing – The horse will set its upper incisor teeth against an object, arch its neck and swallow large quantities of air.

      ☑ **NOTE:** This vice leads to colic and other digestive disturbances because of the excessive air in the digestive tract.
    - ☐ wood chewing
    - ☐ bolting food – The horse will gulp its food without chewing.

      ☑ **NOTE:** This vice can lead to colic and other digestive disturbances.
    - ☐ pawing
    - ☐ pacing
    - ☐ weaving – This is a rhythmical shifting of the weight of the forehand from one forefoot to the other.

      ☑ **NOTE:** This vice develops because of too much food and insufficient exercise.
    - ☐ tail rubbing

OBJECTIVE 6

Optional Activities/
Resources in
Instructor's Guide

List the reasons for vices.

- Boredom (lack of exercise or activity)
- Poor management
- Mishandling
- Abusive treatment

OBJECTIVE 7

Complete Assignment Sheet 1.

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OBJECTIVE 8

Optional Activities/
Resources in
Instructor's Guide

Describe appropriate dress for working around horses.

- Wear comfortable, well-fitting clothing that will not snag or catch on objects.
- Wear footgear that protects feet from hazards such as being stepped on or being injured by nails or other objects around the stables.

  ☑ **NOTE:** Footgear such as boots or hardtoed shoes is preferable.

- Wear gloves if working with ropes or in situations where cuts or splinters are likely to happen.
- Do NOT wear excessive jewelry that might catch or snag on objects.
- Wear appropriate riding attire for specific riding uses.

  EXAMPLE: Wear protective headgear when jumping.

OBJECTIVE 9

Optional Activities/
Resources in
Instructor's Guide

Distinguish between safe and unsafe practices when approaching a horse.

- Speak to the horse as you approach.
- Observe reactions of the horse for indications of its intentions.

  ☑ **NOTE:** The ears are very good indicators of a horse's behavior. For example, if a horse has its ears back it is most likely angry.

- Avoid any quick or unexpected movements.
- Move toward the horse slowly and quietly, but positively.
- Approach the horse by moving to its shoulder.

  ☑ **NOTE:** This is the safest location because a horse cannot paw or kick you in this area, and you are in position to halter the horse.

- Place your hand on the horse's shoulder and rub gently to reassure the horse against danger.

- Have the halter in the correct position if attempting to catch the horse.

  ☑ **NOTE:** You will learn correct haltering procedures in Unit A3, "Handling, Grooming and General Care."

- Do NOT touch the horse's nose.

- Never surprise a horse from behind.

  ☑ **NOTE:** A horse is likely to kick if surprised from the rear.

OBJECTIVE 10

Optional Activities/
Resources in
Instructor's Guide

Distinguish between safe and unsafe practices when handling the horse.

- Handle the horse with confidence and remain calm.

  ☑ **NOTE:** The horse will sense if you are frightened.

- Be considerate; kindness and gentleness are important in getting the horse's cooperation.

  ☑ **NOTE:** Always control your temper but let the horse know that you are in control.

- Do NOT take chances of being stepped on, kicked, or bitten.

- Pay attention to the body language of the horse.

- Never sit or kneel when handling a horse.

- Respect the horse for its strength and ability.

- Realize that different horses will have different temperaments and reactions.

- Avoid loud noises or quick, unexpected movements.

- Always let the horse know what you are doing

  EXAMPLE: If picking up a horse's foot, learn the proper procedure. Do NOT quickly grab the foot, this will startle the horse.

OBJECTIVE 11

Optional Activities/
Resources in
Instructor's Guide

Describe safe practices when leading the horse.

- Lead a horse by walking slightly ahead of it on its near (left) side.
- Never wrap the lead rope or reins around your hand or wrist.
- Remember that horses are much larger and stronger than a person; do NOT get in front of a horse and try to pull if it resists.
- Be cautious when leading a horse through narrow openings or strange surroundings.

OBJECTIVE 12

Optional Activities/
Resources in
Instructor's Guide

Describe safe practices when tying the horse.

- Tie the horse to a secure object, using a quick release knot.

  ☑ **NOTE:** Never tie the horse with bridle reins. Use a halter with a lead rope even if the halter has to be slipped on over the bridle.

- Tie the horse far enough away from other horses to avoid kicking or biting; horses should be tied at least 10 feet apart.
- Always walk around the horse, never under or over the tie rope.
- Always untie the lead shank before taking the halter off the horse.
- Tie the horse at its shoulder height or higher.
- Leave 24-30 inches between the knot and the halter.

OBJECTIVE 13

Complete the Job Sheet.

OBJECTIVE 14

Optional Activities/
Resources in
Instructor's Guide

Explain safety procedures in the horse barn or facility.

- Do not leave tack, equipment, or other objects in aisles.

  EXAMPLES: Shovel, hoe, rake, wheelbarrow

- Be certain all gates are secured.

- Provide proper sanitation.

  EXAMPLE: Control fly population.

OBJECTIVE 15

Optional Activities/
Resources in
Instructor's Guide

Explain safety procedures in the corral, paddock and pasture.

- Be certain there are no objects that could potentially injure the horse in the corral, paddock, or pasture.

  EXAMPLE: A tractor or old car sitting in the pasture

- Be certain all gates are secured.
- Use proper fencing.
- Do NOT leave bailing wire or barbed wire in the corral, paddock or pasture.

  EXAMPLE: If hay has bailing wire, remove the wire before feeding.

OBJECTIVE 16

Optional Activities/
Resources in
Instructor's Guide

List types of restraints.

- Tying
- Hobbles
- Twitches
- War bridles (lip chains)
- Tranquilizers

OBJECTIVE 17

Optional Activities/
Resources in
Instructor's Guide

Describe safety considerations when restraining horses.

- Use the simplest method of restraint possible when working with horses.

  EXAMPLE: A horse that will stand still tied and does not mind being examined or treated does not need further restraint.

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- Use tranquilizers only under the direct supervision of a veterinarian.
- Use the appropriate method of restraint for the situation.
- Do NOT leave restraints on horses for extended periods of time.

  EXAMPLE: Lip twitches can cut off blood circulation.

OBJECTIVE 18

Complete Assignment Sheet 2.

OBJECTIVE 19

Describe legal and ethical obligations for reporting mistreatment of horses.

Required Activities/
Resources
– Discussion

Optional Activities/
Resources in
Instructor's Guide

Start the discussion by asking "What are the obligations of a horse owner or caretaker?"

- Horses cannot speak up for themselves if they are being abused or neglected; they must rely on individuals to bring the abuse or neglect to the attention of the proper authorities.
- Animal abuse is a misdemeanor crime in many states and a felony crime in some states. A person engaging in animal abuse or neglect is breaking the law.
- Be certain that the case is an actual case of abuse or neglect. The animal must be suffering from the actions of the individual. Also, the individual must not be taking appropriate actions for the care of the animal.

  ☑ **NOTE:** You may want to verify your concerns by checking with a trusted and experienced horseperson.

- Do NOT assume someone else will report the case even though it may be a serious case of abuse or neglect.
- When notifying authorities be able to state what type of abuse or neglect is suspected and provide any other pertinent information.
- Do NOT confront the horse owner or caretaker yourself.

OBJECTIVE 20

Complete Assignment Sheet 3.

ASSIGNMENT SHEET 1

SAFETY

A2

Name ______________________ Score __________

OBJECTIVE 7

Analyze descriptions involving horse behavior and body language.

INSTRUCTIONS

Read the scenarios below and then write a short paragraph (2-3 sentences) about the horse behavior and body language. For example, what is the horse conveying, why might they be acting a certain way.

Reading Comprehension
- Gain factual information
- Analyze cause and effect
- Draw conclusions

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition
- Use complete sentences

Cognitive Activities
- Identify underlying causes
- Analyze/synthesize information
- Draw conclusions

1. For the last five years, Joan and Jeff Harden have kept their mare in the same pasture with a Welsh pony which belongs to their daughter. The daughter decided she would like a horse and they sold the pony. The evening after selling the pony, they checked on the mare and she was running the fences, nickering, and smelling. When they fed her, she came to them but seemed distressed.

____

____

____

2. Jack was considering the purchase of a gelding. He had done some riding, but was still a beginner. When he went to look at a gelding that was for sale, it seemed to be just what he wanted. When he arrived the gelding was in a small paddock. He was impressed by how sharp the gelding looked. However, the owner had trouble catching the horse. After the owner had haltered the gelding, Jack started to walk toward it. The gelding laid his ears back and tensed up.

____

____

____

3. Harry was leading a horse from one pasture to a small paddock. Once in the paddock, Harry noticed the horse was focusing its attention toward a spot under the feed manger. The horse tensed up, started to sniff, and began swishing its tail.

4. James was at the rodeo watching the barrel horses perform. He noticed that as one horse was waiting to go, it was stomping its front foot, then stomping its back foot, shaking its head, and dancing around.

5. Becky was working in a stable. The stable had recently acquired a new horse for boarding. Becky noticed that the horse was chewing on the wood in its stall. Several days later she noticed that the horse in the stall next to the new horse was also beginning to chew on the wood.

ASSIGNMENT SHEET 2

SAFETY

A2

Name ______________________________ Score __________

OBJECTIVE 18

Analyze horse handling procedures for correct and incorrect safety practices.

INSTRUCTIONS

Read the scenarios below and analyze the correct and incorrect practices. Write a brief (2-3 sentences) discussion of what the individuals are doing correctly and incorrectly.

Reading Comprehension
- Gain factual information
- Analyze cause and effect
- Draw conclusions

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition
- Use complete sentences

Cognitive Activities
- Identify underlying causes
- Analyze/synthesize information
- Draw conclusions

1. Jess had been riding for about an hour. He decided he needed something to drink. Thinking he would be gone "just a minute," he got off the horse and tied the reins to a post.

____

____

____

2. Rob was grooming the stable horses and was in a hurry to get home. In order to clean the feet of one horse, he reached down quickly and grabbed its hoof.

____

____

____

3. Mike was moving several horses from one pasture to another pasture. The new pasture had an old car off to one side. Mike decided it would be better to return the horses to the original pasture until the car could be removed.

4. Jill had not been around horses very much but wanted to learn more about them. She had a friend who had several horses and asked Jill to go riding. When Jill arrived at the riding area, the friend had the horses tied up and was grooming them. Jill walked up behind one horse and patted it on the rump.

5. Monty works for a stable. Every night after feeding the horses, he checks up and down the aisles and looks around the entry gates to make certain no one has left tack or equipment where it might be a safety hazard.

ASSIGNMENT SHEET 3 SAFETY A2

Name ______________________________ Score __________

OBJECTIVE 20 **Analyze scenarios of reporting abuse and neglect of horses.**

INSTRUCTIONS Read the scenarios below and determine if the case should be reported as animal abuse or neglect. In 2 or 3 sentences, tell whether the case should be reported or not and include the reason for your decision.

Reading Comprehension
- Gain factual information
- Analyze cause and effect
- Draw conclusions

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition
- Use complete sentences

Cognitive Activities
- Identify underlying causes
- Analyze/synthesize information
- Draw conclusions

1. A horse owner keeps several horses in a pasture. The owner feeds and attends to them every day. They have access to fresh, clean water. The horses appear healthy. The owner does not stay long when checking on the horses.

   ____

   ____

   ____

2. Several horses are in a small pasture that has a pond. The horses appear very unhealthy and underfed. One day you notice that one of the horses is lying down in the pasture. The horse is trying to get up but is too weak. No one around knows the owner and neighbors around the horses state that they are also concerned for the horses.

   ____

   ____

   ____

3. A horse in a pasture has a deep cut on its foreleg. The wound appears to have happened recently. You know some people who live close to the pasture and contact them about the horse. They state that they know the owner who lives nearby and will call the owner about the horse. Within thirty minutes the owner is looking at the horse and a veterinarian has been called.

____

____

____

4. A man purchased a horse for his 12-year-old daughter who had never been around horses. He, also, knew little about horses. He knew that his daughter wanted a palomino. The man purchased a 3-year-old palomino gelding that had had some training but was clearly a horse for an experienced rider. The first time the daughter rode the horse, she fell off and broke her arm because she could not control the horse. When her father caught the horse, he started yelling and hitting it. The horse became frightened and started pawing and rearing at the man. The man picked up a shovel and beat the horse, striking at its chest.

____

____

____

JOB
SHEET

SAFETY

A2

Name ____

OBJECTIVE 13

Tie a quick release knot.

EQUIPMENT AND SUPPLIES

- Cotton rope
- Tie ring or rail

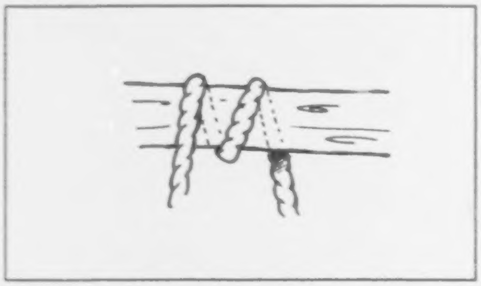
PROCEDURE

Job Acquisition/ Development
- Master specific job task/procedure

Yes No

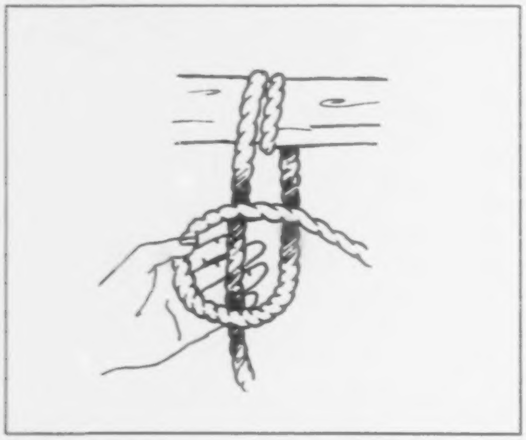
1. Pass the rope twice over the rail from left to right. (Figure 1) ____ ____

FIGURE 1



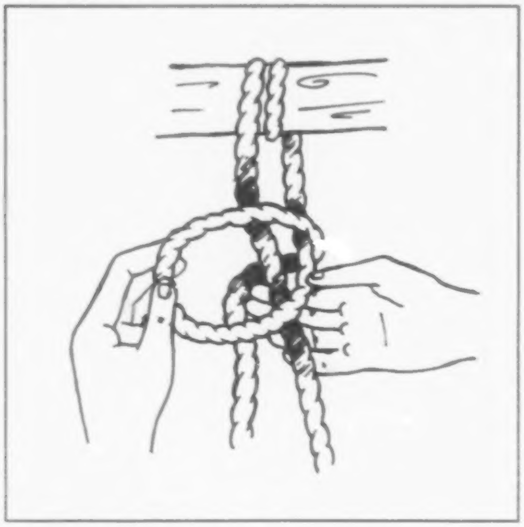
2. Make a loop in the end of the rope and place it over the standing part. (Figure 2) ____ ____

FIGURE 2



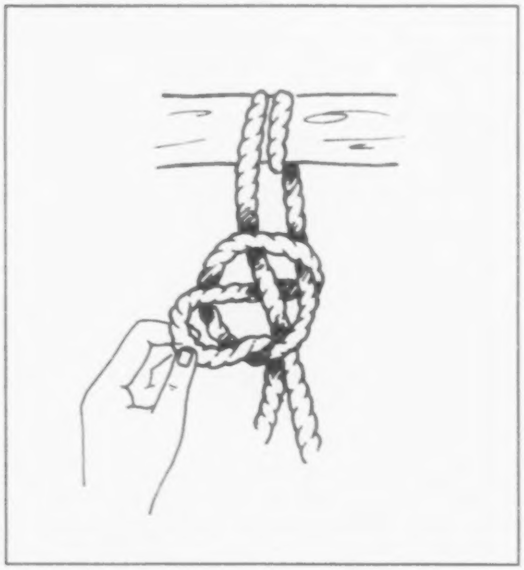
3. **Pass the end behind both the standing part and the loop; push a bight in the end up through the loop. (Figure 3)**	Yes ____	No ____

FIGURE 3



4. Pull the bight to tighten the knot. (Figure 4)	____	____

FIGURE 4



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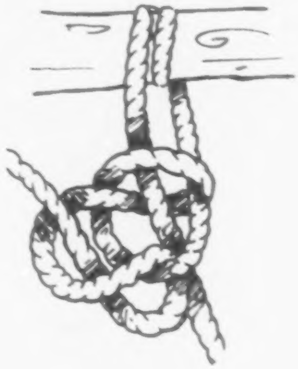
Yes No

5. Pass the end of the rope through the bight so the horse cannot pull free and untie itself. (Figure 5) ____ ____

FIGURE 5



SKILL TEST RECORD

EVALUATOR'S COMMENTS

____

____

____

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Key below.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:

Knot properly tied	4	3	2	1

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the points in Product Evaluation and divide by the total number of criteria. Circle the rating on the Key.

KEY

4 **Skilled** – Can perform job with no additional training.
3 **Moderately Skilled** – Has performed job during training program; limited additional training may be required.
2 **Limited Skill** – Has performed job during training program; additional training is required to develop skill.
1 **Unskilled** – Is familiar with process, but is unable to perform job.

EVALUATOR'S COMMENTS

____

____

____

OBJECTIVE SHEET

HANDLING, GROOMING AND GENERAL CARE

A3

INTRODUCTION

The handling, grooming, and general care of horses is something that must be done every day. The grooming of a horse is an important part of the care of a horse. Grooming removes dirt, dust, grease and dead skin cells from a horse's coat. Grooming also stimulates blood circulation and helps bring the skin's natural oils to the surface giving the coat a shine. Daily grooming and care gives the caretaker the chance to check the horse for injuries. The daily care and grooming provides an opportunity for the caretaker and horse to become familiar with each other. Safety must always be considered when handling and grooming horses.

PREREQUISITES

Equine Management and Production, Unit A2 "Safety."

FOCUS ASSIGNMENTS

Reading Comprehension
- Gain factual information
- Analyze cause and effect
- Draw conclusions

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition
- Use complete sentences

FOCUS ASSIGNMENTS

PREREADING:	Read the Handout *Every Horse*. As you read, pay special attention to the daily work and requirements involved in caring for horses.
WRITING:	Write a short (one paragraph to one page) discussion of the responsibilities involved in caring for horses. Discuss what could happen if these responsibilities were not carried out.

UNIT OBJECTIVE

After completing this unit, you will show the following competencies by mastering the activities on the Job Sheets and by scoring at least 85% on the Written Test.

SPECIFIC OBJECTIVES

1. Identify parts of a halter.
2. Describe the proper fit of the halter.
3. Halter a horse. (Job Sheet 1)
4. Label the sensitive areas of the horse.
5. List reasons for grooming the horse.
6. Identify grooming equipment/aids/products.
7. Match grooming equipment/aids/products to their uses.
8. Select from a list safety factors to consider when physically approaching the horse during grooming.
9. Select from a list safety factors to consider when grooming.
10. List the minimum daily care requirements for horses.
11. Groom a horse. (Job Sheet 2)
12. Wash a horse. (Job Sheet 3)

INFORMATION SHEET

HANDLING, GROOMING AND GENERAL CARE

A3

OBJECTIVE 1

Required Activities/
Resources
– Halter

Optional Activities/
Resources in
Instructor's Guide

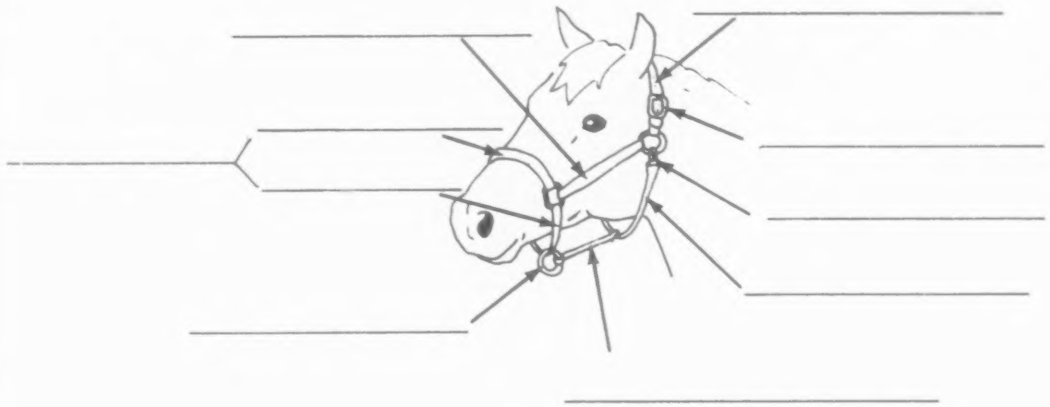
Identify parts of a halter.

Your instructor will display a halter and point out the parts of the halter.

As your instructor points out the parts of the halter, list the parts in the spaces below.

Cheekpiece
Noseband
Nosepiece
Chinpiece
Tie Ring
Crownpiece
Buckle
Snap
Throatlatch
Connecting Strap

FIGURE 1



OBJECTIVE 2

Optional Activities/
Resources in
Instructor's Guide

Describe the proper fit of the halter.

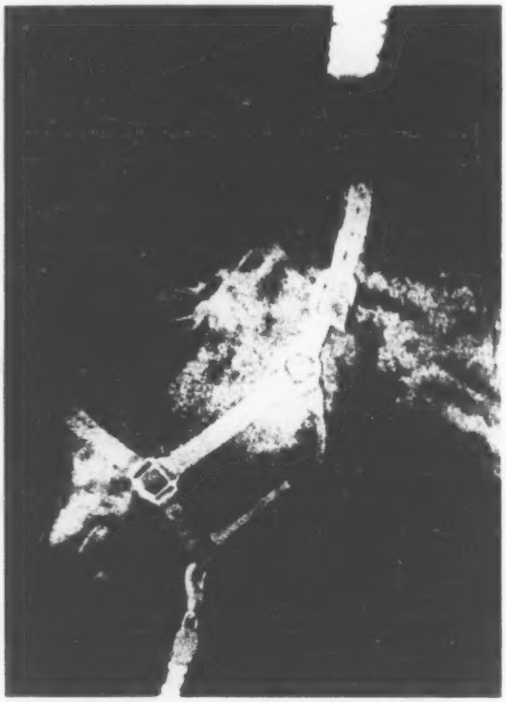
- The halter should be snug without causing the horse discomfort.

- The halter should be appropriate for the situation.

  EXAMPLE: Show halter or halter for every day use.

- The throatlatch should rest just above the prominence of the jaw and the noseband should sit at the right height across the bridge of the nose. (Figure 2)

  FIGURE 2



- Do NOT allow the throatlatch to hang down below the prominence of the jaw. A horse, especially a young horse, may be able to slip a foot between the noseband and throatlatch.

- Do NOT have the halter so tight that the throatlatch pinches the horse.

- The halter should NOT rub against the horse's jawbone or cheekbones.

OBJECTIVE 3

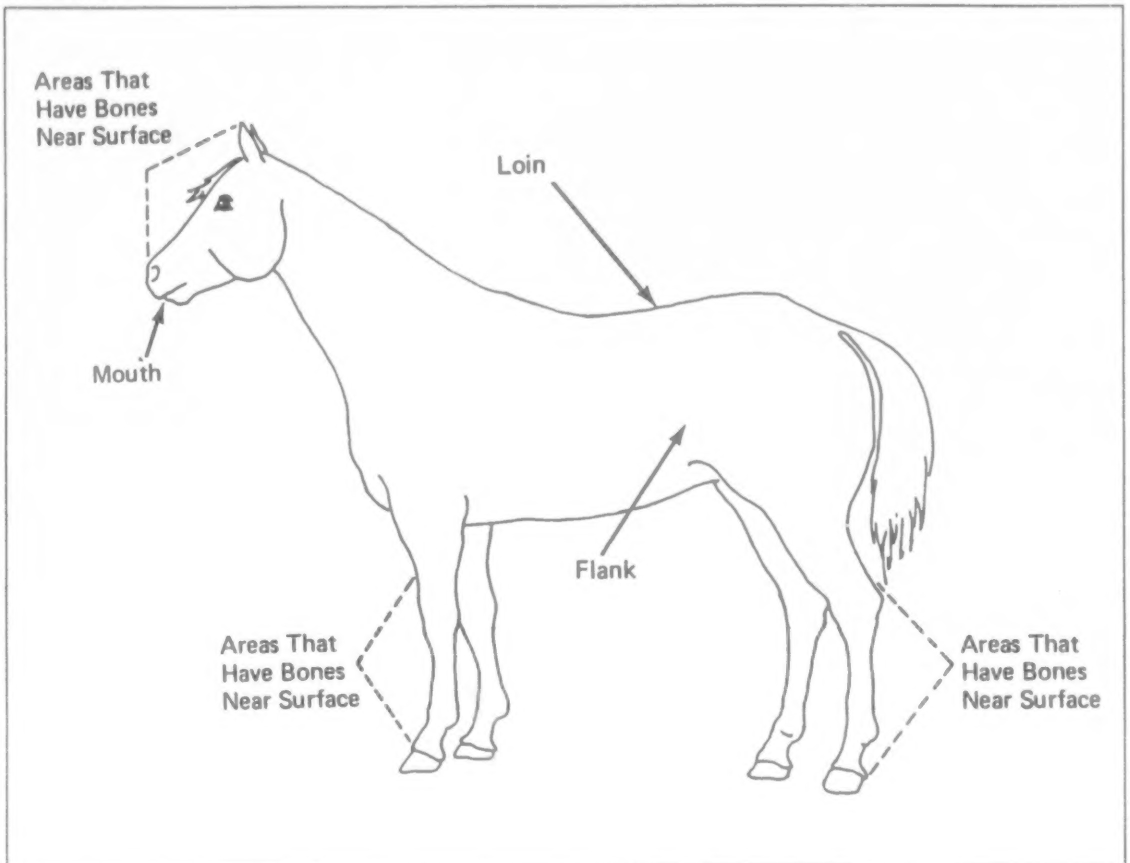
Complete Job Sheet 1.

OBJECTIVE 4

Optional Activities/
Resources in
Instructor's Guide

Label the sensitive areas of the horse.

FIGURE 3


Areas That Have Bones Near Surface
Loin
Mouth
Flank
Areas That Have Bones Near Surface
Areas That Have Bones Near Surface

OBJECTIVE 5

Optional Activities/
Resources in
Instructor's Guide

List reasons for grooming the horse.

WORDS YOU SHOULD KNOW	
rapport	positive relationship

- Removes dirt from the horse's hair

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- Stimulates skin
- Aids in circulation
- Gives the horse a more attractive appearance
- Guards against skin disorders
- Establishes rapport between the horse and the groomer

OBJECTIVE 6

Required Activities/
Resources
– Grooming items
– Discussion

Optional Activities/
Resources in
Instructor's Guide

Identify grooming equipment/aids/products.

You will see 12 examples of grooming equipment/aids/products. You must be able to correctly name each of these items.

Start the discussion by asking "What is this grooming equipment, aid, or product used for?"

OBJECTIVE 7

Optional Activities/
Resources in
Instructor's Guide

Match grooming equipment/aids/products to their uses.

WORDS YOU SHOULD KNOW

bridle path	area of the mane clipped just behind the ears where the crownpiece of a halter or bridle rests

- **animal clippers** – trim hair from ear, face, and jaw
- **body brush** – removes surface dirt and dust
- **cloth or rag** – increases shine by removing small particles missed by brushes
- **coat conditioner** – conditions coat and add shine
- **dandy brush (stiff brush)** – removes dried sweat and deep-seated dirt
- **fly spray** – prevents flies

- **hoof care products** – moisten and polish hoofs
- **hoof pick/brush** – cleans horse's hoofs
- **mane and tail comb** – combs mane and tail
- **rubber curry comb** – removes mud and loosens matted hair and dirt
- **shampoo** – cleans horse's coat
- **sweat scraper** – removes sweat and water (after a bath)

☑ **NOTE:** You may also want to include items such as a sponge and wash bucket.

OBJECTIVE 8

Optional Activities/ Resources in Instructor's Guide

Select from a list safety factors to consider when physically approaching the horse during grooming.

- Always speak to the horse when approaching; do NOT surprise the horse.

  ☑ **NOTE:** Approach the horse from near (left) side as you begin, if possible.

- If haltering the horse, follow the proper procedure for haltering.
- Make physical contact with a horse by first placing your hand on its shoulder and neck; do not touch the end of the horse's nose.
- Let the horse see that you have grooming equipment; the horse will know what you intend to do.

OBJECTIVE 9

Optional Activities/ Resources in Instructor's Guide

Select from a list safety factors to consider when grooming.

- Talk to the horse in a soft voice to keep the horse calm.
- Always let the horse know what you intend to do.

  EXAMPLE: Before placing a blanket on the horse, let the horse see the blanket. Horses are curious and may want to smell the blanket before it is placed on them.

- Avoid abrupt movements or loud noises.
- Do NOT leave grooming tools on the ground; you may trip on them or the horse may step on them.
- NEVER sit or kneel when grooming.
- Do NOT position yourself directly in front of the horse.
- Do NOT walk under the lead rope; always walk around the horse.
- Do NOT stand directly behind the horse when working with its tail; stand off to one side.
- Pay attention to the body language of the horse.
- Always be aware of your position and keep your balance.

OBJECTIVE 10

Optional Activities/
Resources in
Instructor's Guide

List the minimum daily care requirements for horses.

- Feeding – The feeding program should meet the nutritional requirements of the particular horse.

  ☑ **NOTE:** The feeding program of a particular horse will determine the daily care needed. For example, a stalled horse may need to be fed two or three times a day, while a mature horse on maintenance with access to good quality pasture may meet the nutritional requirements from grazing.

- Water – Fresh, clean water should be freely available.
- Cleaning the stall/paddock – If the horse is kept in a stall or small paddock, it should be cleaned and manure removed daily.
- Grooming – Horses that are kept in a stall or ridden frequently should be groomed daily.
- Hoof care – Horse's hoofs should be cleaned and checked for foreign objects and thrush.

- Exercise – Horses need regular exercise.

  ☑ **NOTE:** The amount of exercise needed depends on the particular horse. A performance horse needs more strenuous exercise than a recreational horse. Horses that are kept in large areas will receive exercise from natural activities; while horses kept in stalls may not receive adequate exercise unless turned out or worked daily.

- Check for signs of injury/illness – Horses should be monitored daily for any signs of injury or illness. Observe the horse for the factors listed below:

  - Wounds – Closely observe body for cuts, scratches, and/or swelling.
  - Appetite – The horse should be eating about 2.0-2.5 lbs (0.9-1.13 kg) of feed per 100 lbs (45.36 kg) of body weight.
  - General appearance – Alertness in eyes and ears; hair coat shiny; pliable skin. If the horse is depressed it will have its head down, and will be droopy, lethargic, and listless.

    ☑ **NOTE:** Look for signs of depression in the horse. Depression is one of the first signs that a horse may have an injury/illness. Know the horses you are working with so you will be better able to observe them for changes.

  - Symptoms of pain – Restlessness, tail-wringing, and biting and/or kicking at the abdomen.
  - Lameness – Move the horse and observe for soreness in the limbs.
  - Fecal droppings – Consistency should be formed fecal balls.

    ☑ **NOTE:** Liquid or very hard droppings require attention and are an indication of illness.

OBJECTIVE 11 **Complete Job Sheet 2.**

OBJECTIVE 12 **Complete Job Sheet 3.**

JOB SHEET 1

HANDLING, GROOMING AND GENERAL CARE

A3

Name ______________________________

OBJECTIVE 3

Halter a horse.

EQUIPMENT AND SUPPLIES

- Horse
- Halter and lead

☑ **NOTE:** Secure correct size of halter to fit horse.

⚠ **WARNING:** INJURY TO BOTH HORSES AND HUMANS POSSIBLE. Use caution when haltering a horse.

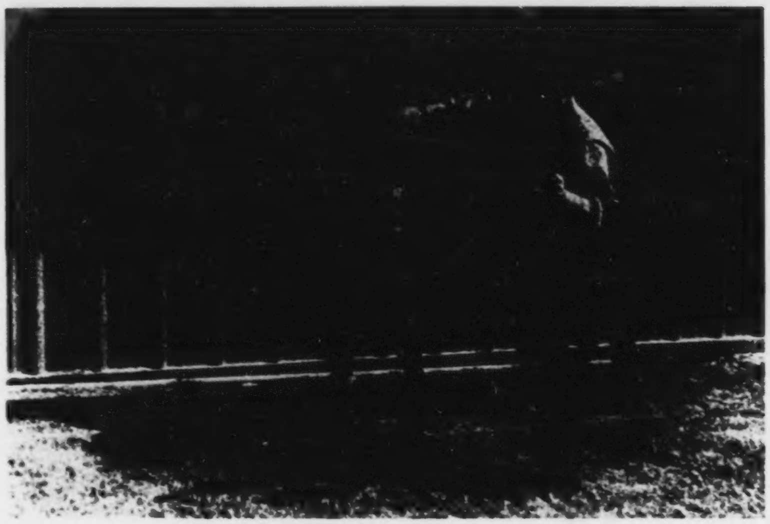
PROCEDURE

Cognitive Activities
- Transfer knowledge/training to new situations

Job Acquisition/ Development
- Master specific job task/procedure

	Yes	No
1. Approach the horse from the near (left) side with the halter in the left hand. (Figure 1)	____	____

FIGURE 1



2. Place your right arm around the horse's neck. (Figure 2)

Yes	No
___	___

FIGURE 2

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	Yes	No
3. Take the buckle in your left hand and the crownpiece in your right hand; slip the horse's nose through the noseband; place the strap over from the far side and place it behind the ears, holding with the left hand. (Figure 3)	____	____

FIGURE 3

Yes No

4. Attach the buckle to the crownpiece. (Figure 4) ____ ____

☑ **NOTE:** If the halter has a snap, take the halter by the crownpiece and slip it over the nose and ears, making sure the nosepiece is in place over the nose. Secure the snap on the throatlatch to the ring connecting the cheekpiece and the buckle.

FIGURE 4

SKILL TEST RECORD

EVALUATOR'S COMMENTS

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Key below.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:

Safety followed	4	3	2	1
Approach to the horse	4	3	2	1
Halter fit and placement	4	3	2	1

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the points in Product Evaluation and divide by the total number of criteria. Circle the rating on the Key.

KEY

4 **Skilled** – Can perform job with no additional training.
3 **Moderately Skilled** – Has performed job during training program; limited additional training may be required.
2 **Limited Skill** – Has performed job during training program; additional training is required to develop skill.
1 **Unskilled** – Is familiar with process, but is unable to perform job.

EVALUATOR'S COMMENTS

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JOB SHEET 2

HANDLING, GROOMING AND GENERAL CARE

A3

Name ____________________________

OBJECTIVE 11

Groom a horse.

EQUIPMENT AND SUPPLIES

- Horse
- Rubber curry comb
- Mane and tail comb or brush
- Hoof pick/brush
- Stiff brush (dandy brush)
- Soft brush
- Cloth or rag
- Animal clippers
- Bot block
- Fly spray

⚠ **WARNING:** INJURY TO BOTH HORSES AND HUMANS POSSIBLE. Use caution when grooming a horse.

PROCEDURE

Cognitive Activities
- Transfer knowledge/training to new situations

Job Acquisition/ Development
- Master specific job task/procedure

Yes No

1. Clean and check feet. ____ ____

☑ **NOTE:** This procedure is taught in Unit B4, Job Sheet 1. Check with your instructor regarding this step.

2. Use the rubber curry comb in a small circular motion to remove mud and loosen matted hair, dirt, and scurf. Start on one side of the horse near the neck and work toward the rear. ____ ____

☑ **NOTE:** Using the curry comb over bony areas such as the head and below the knees and hocks is uncomfortable for the horse.

	Yes	No
3. Brush the horse with a stiff brush using the same process as with the curry comb. Brush in the same direction as hair growth. Use caution when brushing sensitive areas such as flanks and lower legs.	____	____
4. Brush the horse with a soft brush, starting with the horse's head and working toward the rear. Clean the brush after several strokes.	____	____
5. Untangle the mane and tail with the mane and tail comb.	____	____
☑ **NOTE:** Some people prefer to untangle the mane and tail with the fingers and then use a brush since the mane and tail comb can break off or pull out the hairs.		
6. Trim bridle path with animal clippers. Clip a space in the mane just behind the horse's ears.	____	____
7. Trim fetlocks and pasterns with animal clippers.	____	____
8. Trim head and face area with animal clippers.	____	____
9. Wipe the horse with a cloth or rag to increase shine.	____	____
10. Treat the horse with fly spray, if appropriate.	____	____

SKILL TEST RECORD

EVALUATOR'S COMMENTS

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PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Key below.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:

Safety observed	4	3	2	1
Dirt/dust removed	4	3	2	1
Mane/tail groomed	4	3	2	1
Appropriate trim length	4	3	2	1

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the points in Product Evaluation and divide by the total number of criteria. Circle the rating on the Key.

KEY

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3 **Moderately Skilled** – Has performed job during training program; limited additional training may be required.
2 **Limited Skill** – Has performed job during training program; additional training is required to develop skill.
1 **Unskilled** – Is familiar with process, but is unable to perform job.

EVALUATOR'S COMMENTS

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JOB SHEET 3

HANDLING, GROOMING AND GENERAL CARE

A3

Name ______________________________

OBJECTIVE 12

Wash a horse.

EQUIPMENT AND SUPPLIES

- Horse
- Halter and lead
- Sponge
- Bucket or hose
- Warm water
- Soap or shampoo
- Sweat scraper
- Rubber curry comb
- Soft brush
- Towels

⚠ **WARNING:** INJURY TO BOTH HORSES AND HUMANS POSSIBLE. Use caution when washing a horse.

PROCEDURE

Cognitive Activities
- Transfer knowledge/training to new situations

Job Acquisition/Development
- Master specific job task/procedure

Yes No

1. Secure the horse by tying or having someone hold the horse. ____ ____
2. Wet horse thoroughly with warm water using either a sponge or hose. ____ ____
3. Apply shampoo starting at the neck behind the ears and work toward the tail. Scrub one section in a circular motion using a rubber curry comb. ____ ____
4. Wash the horse's face with a sponge, making sure no water or soap gets in the horse's ears. ____ ____
5. Clean the horse's mane and tail and wash the horse's tail in a bucket of soapy water and rinse with clean water. Be sure to clean under the tail. ____ ____

☑ **NOTE:** Rinsing the tail with a conditioner will help in removing tangles.

	Yes	No
6. Rinse the horse thoroughly with warm water making sure no soap remains.	____	____
☑ **NOTE:** Rinsing with a hose is easiest if the horse is not bothered by the spraying.		
7. Remove excess water with a sweat scraper.	____	____
8. Dry the horse with clean, dry towels if the weather is not warm.	____	____
9. As the coat dries, brush it with a soft body brush to keep the hairs lying down.	____	____
10. When the horse is completely dry, brush and rub the coat to bring up the natural skin oil.	____	____

SKILL TEST RECORD

EVALUATOR'S COMMENTS

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PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Key below.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:

Safety observed	4	3	2	1
Coat clean	4	3	2	1
Mane and tail clean	4	3	2	1
Coat brushed	4	3	2	1

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the points in Product Evaluation and divide by the total number of criteria. Circle the rating on the Key.

KEY

4 **Skilled** – Can perform job with no additional training.
3 **Moderately Skilled** – Has performed job during training program; limited additional training may be required.
2 **Limited Skill** – Has performed job during training program; additional training is required to develop skill.
1 **Unskilled** – Is familiar with process, but is unable to perform job.

EVALUATOR'S COMMENTS

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OBJECTIVE SHEET

HANDLING THE YOUNG, UNBROKEN HORSE

A4

INTRODUCTION

Handling young, unbroken horses requires skills such as patience, knowledge of horse behavior, and knowledge of breaking techniques. The young horse is learning the basics which include being halter broken and being able to longe. The manner in which the young horse learns basic handling and breaking will help to determine how the horse reacts to and builds up to more advanced training. Safety must always be considered when handling young horses.

PREREQUISITES

Equine Management and Production, Unit A2 "Safety."

FOCUS ASSIGNMENTS

Reading Comprehension
- Gain factual information
- Analyze cause and effect
- Draw conclusions

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition
- Use complete sentences

FOCUS ASSIGNMENTS	
PREREADING:	Read the Handout *It Takes Time*. As you read pay special attention to the work and skills involved in halter breaking and teaching a horse to longe.
WRITING:	Write a short (one paragraph) discussion of the work involved in handling the young, unbroken horse. Discuss the qualities a person should have in order to break horses.

UNIT OBJECTIVE

After completing this unit, you will show the following competencies by mastering the activities on the Job Sheets and by scoring at least 85% on the Written Test.

SPECIFIC OBJECTIVES

1. Match the stages of learning in a horse's training to the correct descriptions.
2. List factors to consider in training the young horse.
3. Select from a list factors to consider when physically approaching the young horse.
4. Discuss the uses of voice aids with young horses.
5. Describe the use of restraint in handling the young, unbroken horse.
6. Halter break a foal. (Job Sheet 1)
7. Halter break a weanling. (Job Sheet 2)
8. Teach a horse to longe. (Job Sheet 3)

INFORMATION SHEET — HANDLING THE YOUNG, UNBROKEN HORSE — A4

OBJECTIVE 1

Optional Activities/
Resources in
Instructor's Guide

Match the stages of learning in a horse's training to the correct descriptions.

- Early training – Training of the young horse from birth until being ridden
- Ground training – The training procedures up to the point of getting on the horse's back
- Breaking to ride – Teaching the horse to accept a rider and respond to basic artificial and natural handling aids such as sound and touch of the rider and accepting a bit
- Training for basics – Teaching the horse collection, correct head carriage, leads, pivots, and backing up
- Specialized training – Developing the horse's ability for certain tasks such as cutting, roping, racing, jumping, or dressage
- Re-education – To correct training already completed or perfect the work of a horse already well-trained; tune-up

OBJECTIVE 2

Optional Activities/
Resources in
Instructor's Guide

List factors to consider in training the young horse.

- Develop a definite plan.

  EXAMPLE:
  1. Break to lead; halter break
  2. Teach to stand tied
  3. Groom
  4. Pick up feet

- Be consistent in the use of training aids and cues used by the trainer.
- Do not expect the horse to progress too rapidly.

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- Do not demand excessive work from a young horse.

  ☑ **NOTE:** Foals have a short attention span and should not be worked for over 15 minutes at one time.

OBJECTIVE 3

Select from a list factors to consider when physically approaching the young horse.

Optional Activities/ Resources in Instructor's Guide

- Speak in a soft voice.
- Confine the horse in a corner of small area with the horse facing you.
- Place your right hand on the horse's shoulder first.
- Place your right arm around the horse's neck.
- Slip the halter on very slowly.
- Work slowly and deliberately but with confidence.

OBJECTIVE 4

Discuss the uses of voice aids with young horses.

Optional Activities/ Resources in Instructor's Guide

- The tone of voice is most important; a soothing tone of voice will have a calming effect on a horse.
- Individual words of command can be taught if the same tone of voice is used with each command.
- The voice should be used to reward or correct young horses.
- Whether voice or physical discipline is used, the punishment as well as the reward should fit the behavior.
- The voice should be used when other types of communication aids are not suitable.
- Be consistent; develop a trust with the horse.

OBJECTIVE 5

Describe the use of restraint in handling the young, unbroken horse.

Optional Activities/
Resources in
Instructor's Guide

- Suckling foals can be restrained by cradling the foal gently in your arms. Cradle the foal by holding under the neck area and around the quarters.

  ☑ **NOTE:** This will accustom the foal to being restrained. This method does take time but helps to instill good habits in the foal. Do not restrain the foal only by holding its neck.

- Foals can be restrained by holding under the neck and grasping their tail and bringing it up over the croup if more restraint is needed.

  ☑ **NOTE:** When the foal starts to set down, release some tension on the tail to make it stand.

- Foals should be halter broken and taught to stand tied.
- Foals can be restrained in the stocks if necessary to treat or medicate them.
- Accustom foals to restraint methods gradually, do not use any more restraint than is necessary.
- Remember safety factors.
  - Do not stand in front or behind foals.
  - Do not walk up and touch a foal on the hindquarters.

OBJECTIVE 6

Complete Job Sheet 1.

OBJECTIVE 7

Complete Job Sheet 2.

OBJECTIVE 8

Complete Job Sheet 3.

JOB SHEET 1

HANDLING THE YOUNG UNBROKEN HORSE

A4

Name ______________________________

OBJECTIVE 6

Halter break a foal.

EQUIPMENT AND SUPPLIES

- Halter
- Lead rope
- Foal in small confined area
- Rope, 10 feet, to use for rump rope
- Tire inner tube

⚠ **WARNING**: INJURY TO BOTH HORSES AND HUMANS POSSIBLE. Use caution when handling foals.

PROCEDURE

Functional Reading
- Follow written instructions

Cognitive Activities
- Transfer knowledge/training to new situations

Job Acquisition/ Development
- Master specific job task/procedure

	Yes	No
1. Approach the foal in a slow, deliberate manner, being careful not to get the foal excited. This can be done by crowding the foal into a corner using the mare. (Figure 1)		

FIGURE 1

	Yes	No
2. Slip the halter on the foal. (Figures 2 and 3)	____	____

FIGURE 2

FIGURE 3

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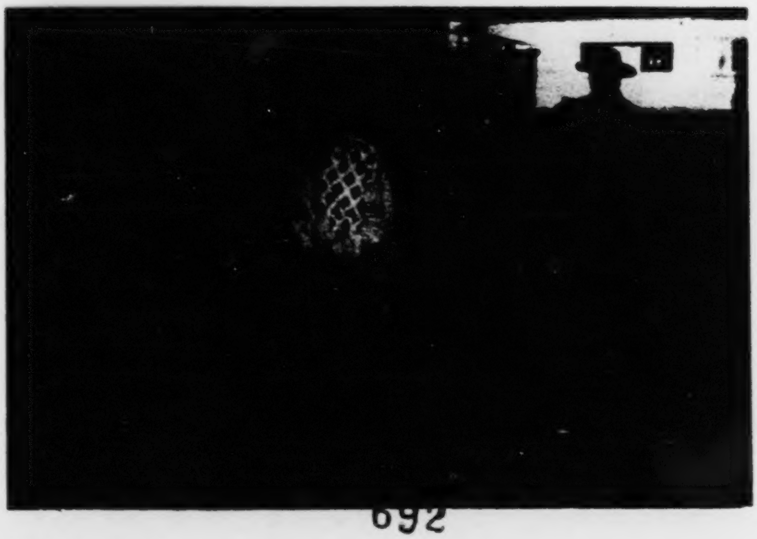
	Yes	No
3. Reassure the foal that you are not going to harm it by gently rubbing on its shoulder and speaking in a soft voice.	____	____
4. Snap the lead rope in the tie ring.	____	____
5. Place the rump rope over the hips with one end coming through the halter. (Figure 4)	____	____

FIGURE 4

	Yes	No
6. Lead the mare out of the stall and let the foal follow. (Figure 5)	____	____

FIGURE 5



Yes No

7. Stay to the left of the foal's head or neck area, pulling forward on the lead rope and rump rope. Release pressure on the rump rope when the foal is moving in the desired direction. ____ ____

☑ **NOTE:** When the rump rope is tightened, the foal may jump forward. Be careful not to get stepped on.

8. Continue leading the mare and foal around until the foal is following the lead. Release pressure when foal responds. ____ ____

9. Work away from the mare to help associate the foal with being led instead of following mother. ____ ____

☑ **NOTE:** Continue this process for short periods each day until satisfied with the foal's progress.

10. Teach the foal to stand tied by using tire inner tube tied to a barn wall or post in the middle of a pen. (Figure 6) ____ ____

☑ **NOTE:** Keep the dam close by for security.

FIGURE 6

	Yes	No
11. Continue to work with the foal in short sessions until the foal stands tied and does not fight the lead rope.	____	____
12. Continue working with the foal periodically to reinforce what it has learned.	____	____

SKILL TEST RECORD

EVALUATOR'S COMMENTS

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PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Key below.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:

Safety followed	4	3	2	1
Halter placed on foal	4	3	2	1
Foal leads	4	3	2	1
Foal stands tied	4	3	2	1

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the points in Product Evaluation and divide by the total number of criteria. Circle the rating on the Key.

KEY

4 **Skilled** – Can perform job with no additional training.
3 **Moderately Skilled** – Has performed job during training program; limited additional training may be required.
2 **Limited Skill** – Has performed job during training program; additional training is required to develop skill.
1 **Unskilled** – Is familiar with process, but is unable to perform job.

EVALUATOR'S COMMENTS

JOB
SHEET 2

HANDLING THE YOUNG, UNBROKEN HORSE

A4

Name ____________________

OBJECTIVE 7

Halter break a weanling.

EQUIPMENT AND SUPPLIES

- Halter
- Lead rope
- Weanling

⚠ **WARNING:** INJURY TO BOTH HORSES AND HUMANS POSSIBLE. Use caution when handling foals.

PROCEDURE

Functional Reading
- Follow written instructions

Cognitive Activities
- Transfer knowledge/training to new situations

Job Acquisition/ Development
- Master specific job task/procedure

	Yes	No
1. Approach the foal in a slow, deliberate manner being careful not to get the foal excited.	____	____
2. Slip the halter on the foal.	____	____
3. Snap the lead rope in the tie ring.	____	____
4. Gain the foal's trust by gently rubbing and brushing the foal.	____	____

Yes No

5. Ask the foal to take one step to either side. (Figure 1) ____ ____

FIGURE 1

6. Ask the foal to take one step to the other side. ____ ____

☑ **NOTE:** Remember, what you do to one side of the foal, you must also do to the other side.

7. Ask the foal to take two steps, then three, etc. ____ ____

8. Keep the sessions short (5-15 minutes) and do them frequently. ____ ____

9. Introduce the foal to the butt rope to help in learning to lead. ____ ____

10 Once leading in the stall, progress outside of the stall. ____ ____

☑ **NOTE:** Foals may rare and either flip over backward or hit their heads on walls and obstacles. You must know when to give slack and when to restrain. Remove all obstacles from the stall if foal is likely to injure itself.

SKILL TEST RECORD

EVALUATOR'S COMMENTS

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PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Key below.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:

Safety followed	4	3	2	1
Halter on weanling	4	3	2	1
Weanling leads	4	3	2	1

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the points in Product Evaluation and divide by the total number of criteria. Circle the rating on the Key.

KEY

- **4** **Skilled** – Can perform job with no additional training.
- **3** **Moderately Skilled** – Has performed job during training program; limited additional training may be required.
- **2** **Limited Skill** – Has performed job during training program; additional training is required to develop skill.
- **1** **Unskilled** – Is familiar with process, but is unable to perform job.

EVALUATOR'S COMMENTS

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JOB SHEET 3

HANDLING THE YOUNG, UNBROKEN HORSE

A4

Name ______________________________

OBJECTIVE 8 **Teach a horse to longe.**

EQUIPMENT AND SUPPLIES

- Well-fitted halter
- Longe line
- Whip
- Splint boots and bell boots
- Pen, round, 40 foot to 60 foot in diameter
- Young horse that has been taught to lead and to stop

⚠ **WARNING:** INJURY TO BOTH HORSES AND HUMANS POSSIBLE. Use caution when longing a horse.

PROCEDURE

Functional Reading
- Follow written instructions

Cognitive Activities
- Transfer knowledge/training to new situations

Job Acquisition/ Development
- Master specific job task/procedure

	Yes	No
1. Place bell boots and splint boots on the horse's front legs. (Figure 1 left front leg)	____	____

FIGURE 1

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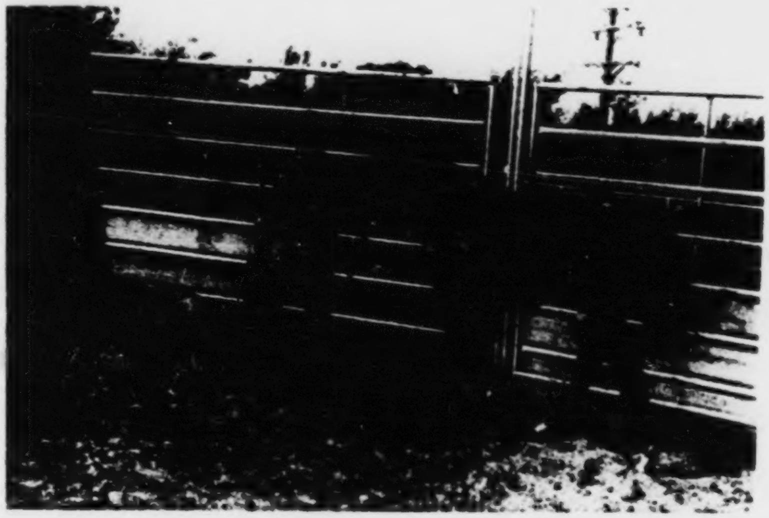
	Yes	No
2. Lead the horse in the circle so that it can become accustomed to the new equipment and training area. (Figure 2)	____	____

FIGURE 2



Yes No

3. With the longe line in left hand, start the horse in an extended trot in a counter clockwise circle to left; make a tight circle, letting out line and increasing the size of the circle as the horse progresses. (Figure 3) ____ ____

☑ **NOTE:** Be careful if standing close to the horse. The horse may kick with its hind legs.

FIGURE 3

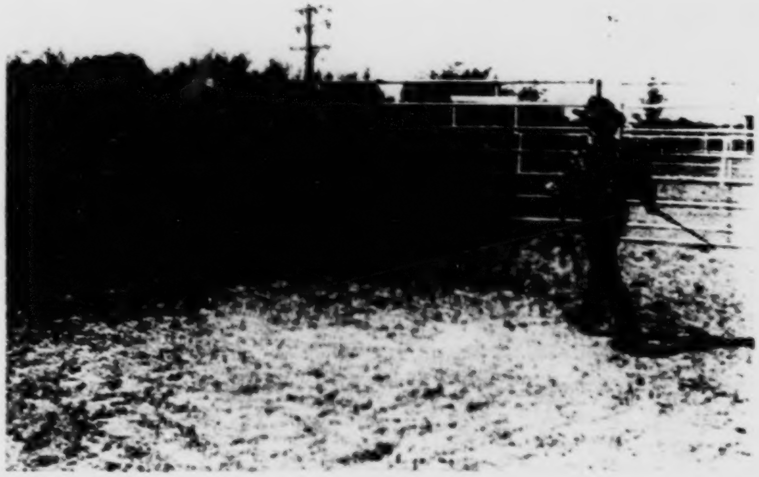
4. With the longe line in the left hand and whip in the right, urge the horse to continue moving forward. ____ ____

5. Work in a small circle, reinforcing voice aids of horse stopping. ____ ____

	Yes	No
6. Continue the procedure with the horse, increasing the perimeter of the horse's circle while you decrease the perimeter of your circle. (Figure 4)	____	____

☑ **NOTE:** This should be continued until the horse is moving in a large circle while you are standing in one spot.

FIGURE 4



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Yes No

7. Work at an extended trot in both directions to work muscles equally. (Figures 5 and 6) ____ ____

☑ **NOTE:** Do not allow the horse to bolt, try to run away, or reverse direction.

FIGURE 5

FIGURE 6

Yes No

8. Canter the horse once the trot is mastered. (Figure 7) ____ ____

FIGURE 7

12. Make sure the horse is on the correct lead when cantering. ____ ____

☑ **NOTE:** The horse should not pull on the longe line or try to decrease the size of the circle.

13. Change directions to work on correct leads. ____ ____

14. Keep lessons short but stop on a positive note. ____ ____

☑ **NOTE:** After trained, graduate exercise regime. Do NOT over exercise. Be careful when working foals (3 minutes at extended trot) because their legs are more easily overstressed. To develop muscles equally on each side of the horse, work the horse an equal amount of time in both clockwise and counter clockwise directions.

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SKILL TEST RECORD

EVALUATOR'S COMMENTS

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Key below.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:

Safety followed	4	3	2	1
Horse walks on longe line	4	3	2	1
Horse trots on longe line	4	3	2	1
Horse canters on longe line	4	3	2	1
Horse stops and reverses direction	4	3	2	1

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the points in Product Evaluation and divide by the total number of criteria. Circle the rating on the Key.

KEY

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1 **Unskilled** – Is familiar with process, but is unable to perform job.

EVALUATOR'S COMMENTS

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OBJECTIVE SHEET

HORSE HEALTH AND DISEASE PREVENTION

B1

INTRODUCTION

Horses need both preventive and control measures in a health care program. In order for the horse owner or caretaker to provide proper health care it is important to know about the anatomy and physiology of the horse, the vital signs of the horse, diseases of the horse, and proper management practices related to health care.

PREREQUISITES

Equine Management and Production, Unit A2 "Safety."

FOCUS ASSIGNMENTS

FOCUS ASSIGNMENTS	
PREREADING:	Read the Handout *A Lot to Know*. As you read, pay special attention to the aspects of health and disease prevention of which owners and caretakers of horses need to be aware.
WRITING:	Write a short (one paragraph) discussion on the importance of knowing about horse health and disease prevention.

Reading Comprehension
- Gain factual information
- Analyze cause and effect
- Draw conclusions

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition
- Use complete sentences

UNIT OBJECTIVE

After completing this unit, you will show the following competencies by mastering the activities on the Assignment and Job Sheets and by scoring at least 85% on the Written Test.

SPECIFIC OBJECTIVES

1. Identify the parts of the horse.
2. Label the parts of the skeletal system.
3. Label the major parts of the muscular system.
4. Label the parts of the circulatory system.
5. Select from a list functions of the circulatory system.
6. Label the parts of the respiratory system.
7. List functions of the respiratory system.
8. Label the parts of the nervous system.
9. Match parts of the nervous system to their functions.
10. Label the parts of the digestive system.
11. Match parts of the digestive system to their descriptions.
12. Label the parts of the reproductive system of the mare.
13. Match parts of the mare reproductive system to their functions.
14. Label the parts of the reproductive system of the stallion.
15. Match parts of the stallion reproductive system to their functions.
16. Describe the endocrine system.
17. List characteristics of a healthy horse.
18. List the vital signs and their normal ranges.
19. Check the vital signs. (Job Sheet)
20. Select from a list components essential for maintaining an effective health care program.
21. List diseases which may be prevented by immunization.
22. Describe treatment of a new horse that has just been purchased or brought on the farm/ranch.
23. Complete a chart on infectious diseases.

24. List means by which infectious diseases are passed from one horse to another.

25. Complete a chart on noninfectious diseases.

26. Select from a list items to be recorded in case history.

27. Complete record forms on horse health. (Assignment Sheet)

INFORMATION SHEET

HORSE HEALTH AND DISEASE PREVENTION

B1

OBJECTIVE 1

Required Activities/ Resources
– Transparency Master 1

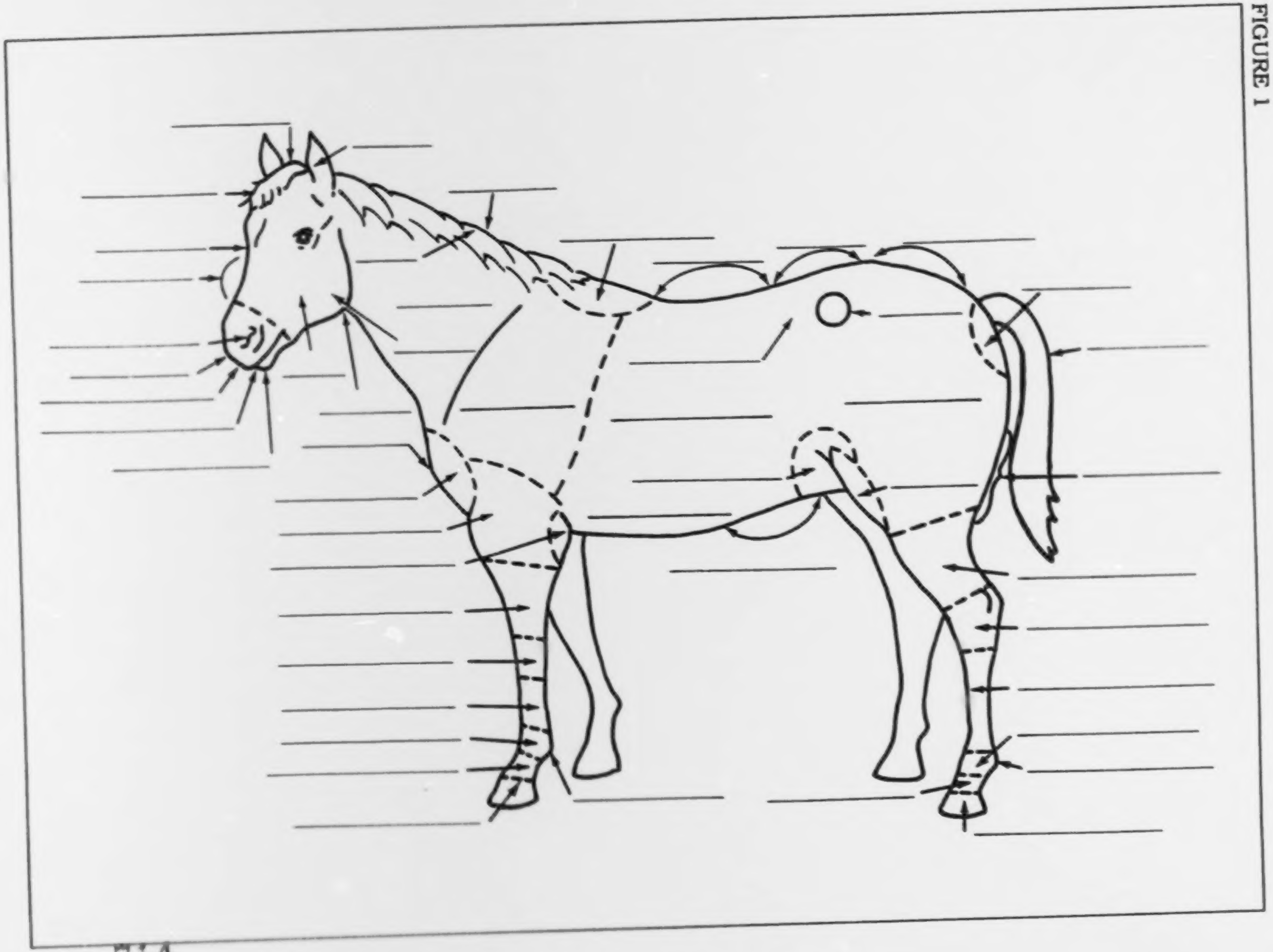
Identify the parts of the horse.

You will see one transparency showing the parts of the horse.

As you view the transparency, list the structures shown on the following page in the correct spaces.

Ear
Poll
Forehead
Face
Bridge of Nose
Nostril
Muzzle
Upper lip
Lower lip
Under lip
Cheek
Jaw
Throatlatch
Point of Shoulder
Chest
Arm
Elbow
Forearm
Knee
Cannon
Ankle
Pastern
Coronet
Fetlock
Girth
Crest
Mane
Neck
Shoulder
Withers
Back
Barrel
Coupling
Loin
Point of Hip
Croup
Buttock
Thigh
Tail
Flank
Abdomen
Stifle
Quarter
Gaskin
Hock
Hoof or foot

FIGURE 1



OBJECTIVE 2

Required Activities/
Resources
– Transparency Master 2

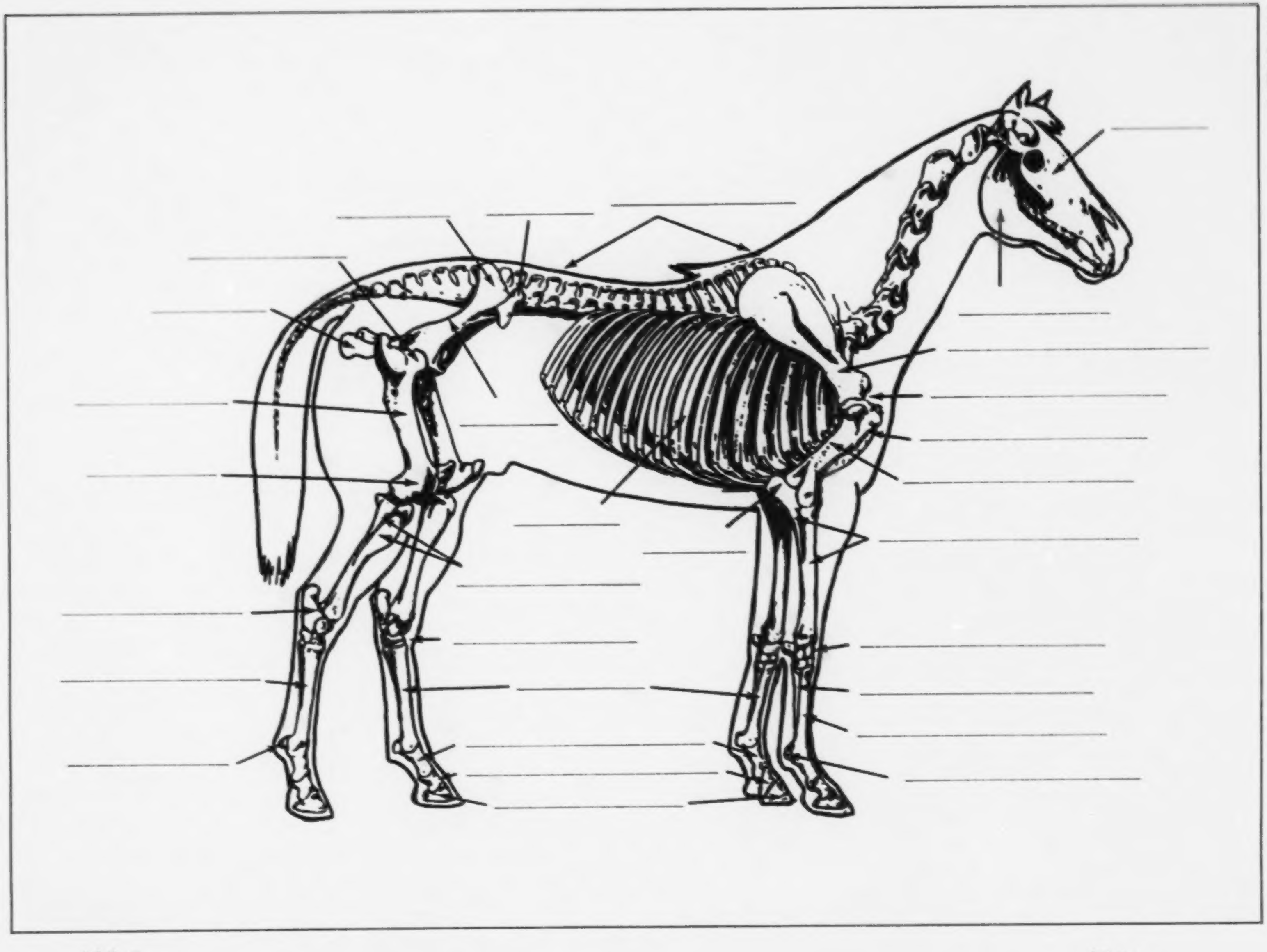
Label the parts of the skeletal system.

You will see one transparency showing the parts of the skeletal system.

As you view the transparency, list the structures shown on the following page in the correct spaces.

- Skull
- Mandible
- Scapula or Shoulder Bone
- Shoulder Joint
- Sternum
- Humerus or Arm Bone
- Radius and Ulna (Forearm)
- Carpal or Knee Bone
- Small Metacarpal or Splint Bone
- Large Metacarpal or Cannon
- Sesamoid
- Spinous Process
- Point of Hip
- Point of Croup
- Hip Joint
- Ischium
- Femur or Thigh
- Stifle Joint
- Tarsus or Hock
- Large Metatarsal or Cannon
- Tibia and Fibula or Leg Bones
- Tarsal or Hock Bones
- Cannon Bone
- 1st Phalanx (Long Pastern)
- 2nd Phalanx (Short Pastern)
- 3rd Phalanx (Coffin)
- Pelvis
- Ribs
- Elbow

FIGURE 2



OBJECTIVE 3

Required Activities/
Resources
– Transparency Master 3

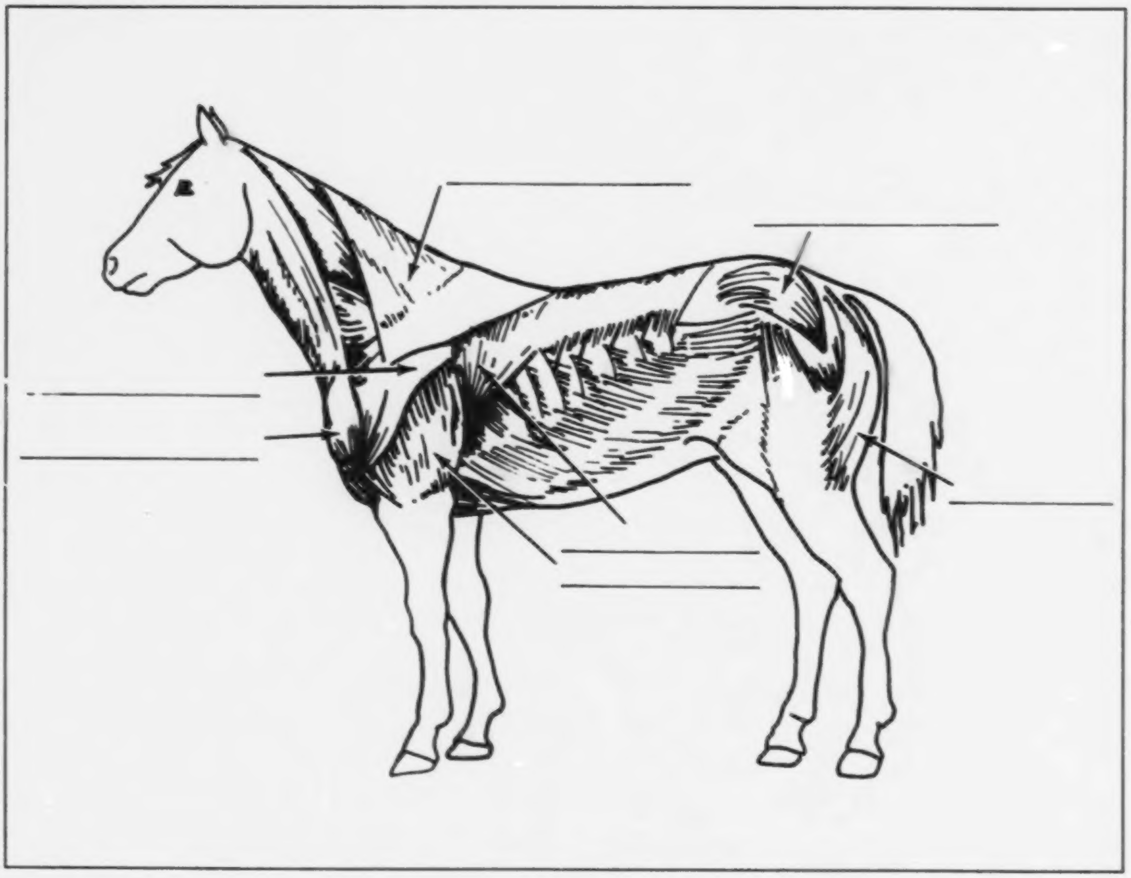
Label the major parts of the muscular system.

You will see one transparency showing the major parts of the muscular system.

As you view the transparency, list these structures in the spaces below.

Deltoid
Trapezius
Semitendinosus
Middle Gluteus
Pectorals, superficial
Latissimus dorsi
Triceps brachii

FIGURE 3



OBJECTIVE 4

Required Activities/
Resources
– Transparency Master 4

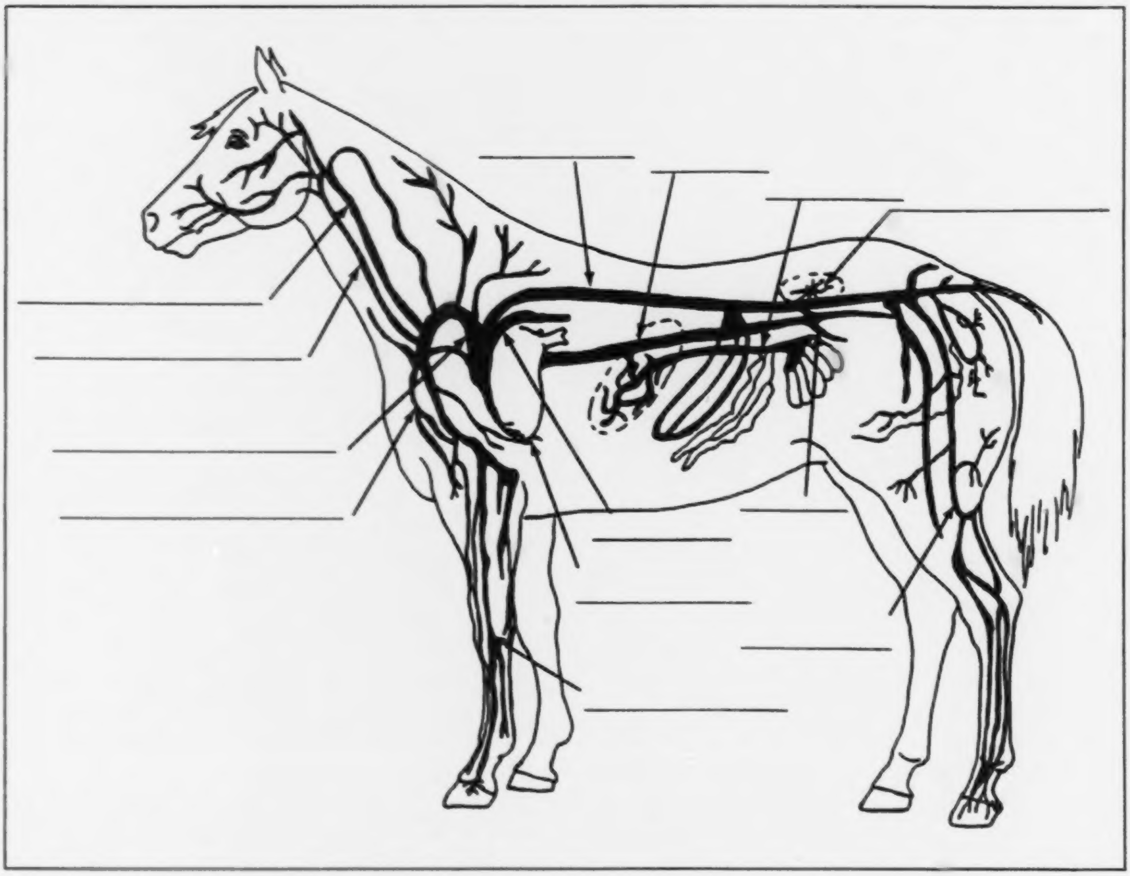
Label the parts of the circulatory system.

You will see one transparency showing the parts of the circulatory system.

As you view the transparency, list these structures in the spaces below.

Common Carotid Artery
Jugular Vein
Subclavian Artery
Cephalic Vein
Aorta
Hepatic Vein
Portal Vein
Renal Artery
Pulmonary Artery
Thoracic Artery (Internal)
Median Artery
Mesenteric Artery
Femoral Artery

FIGURE 4



OBJECTIVE 5

Optional Activities/
Resources in
Instructor's Guide

Select from a list functions of the circulatory system.

- Transports nutrients from the alimentary tract to tissues
- Removes waste products of metabolism
- Transports oxygen to tissues
- Transports endocrine secretions
- Equalizes water content
- Acts as a temperature regulator
- Regulates the acidity of the body
- Acts as a carrier for defense mechanism against microorganisms
- Aids in the immunity to disease

OBJECTIVE 6

Required Activities/
Resources
– Transparency Master 5

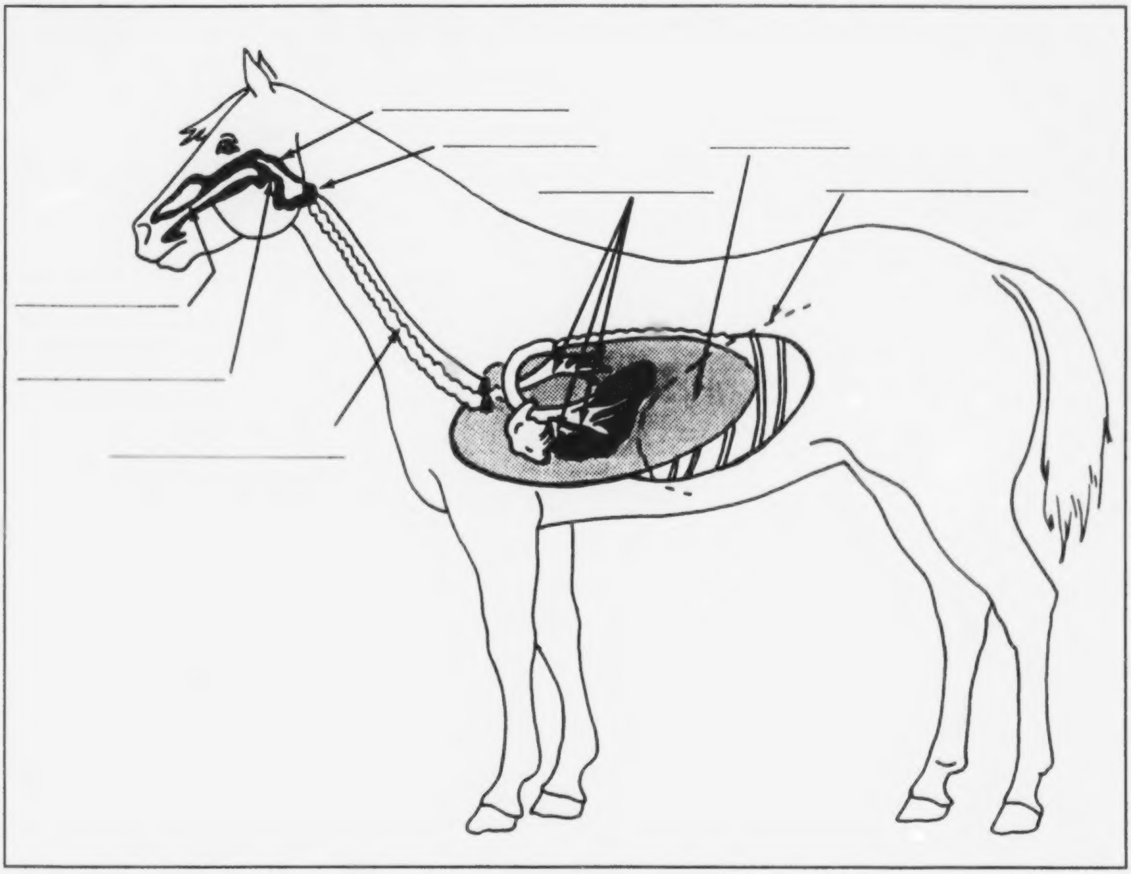
Label the parts of the respiratory system.

You will see one transparency showing the parts of the respiratory system.

As you view the transparency, list these structures in the spaces below.

Pharynx
Larynx
Bronchi
Lungs
Diaphragm
Nasal Passages
Epiglottis
Trachea

FIGURE 5



OBJECTIVE 7

Optional Activities/
Resources in
Instructor's Guide

List functions of the respiratory system.

- Draws air into the lungs
- Aids the circulatory system by inhaling oxygen and exhaling carbon dioxide
- Aids in body temperature regulations, elimination of water, and making sounds

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OBJECTIVE 8

Required Activities/
Resources
– Transparency Master 6

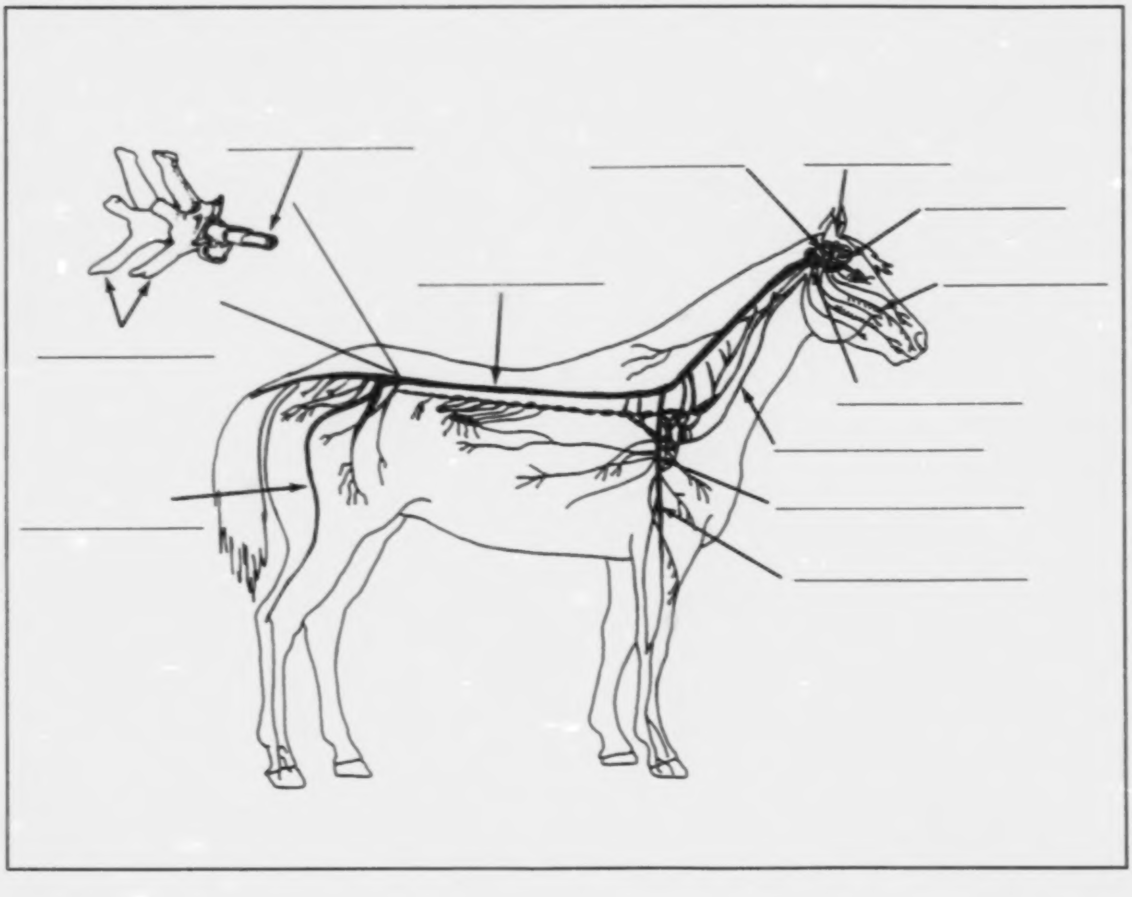
Label the parts of the nervous system.

You will see one transparency showing the parts of the nervous system.

As you view the transparency, list these structures in the spaces below.

- Cerebellum
- Brain
- Cerebrum
- Cranial Nerves
- Medulla Oblongata
- Sympathetic Nerves
- Parasympathetic Nerves (Vagus)
- Brachial Plexus
- Spinal Cord
- Vertebrae
- Lumbo-sacral Plexus

FIGURE 6



OBJECTIVE 9

Optional Activities/
Resources in
Instructor's Guide

Match parts of the nervous system to their functions.

- **cerebrum** – controls intelligence, memory, emotion, and senses; largest part of the brain
- **cerebellum** – responsible for muscular coordination and balance; small rear portion of the brain
- **medulla oblongata** – controls involuntary actions, such as heart beat, circulation, respiration, and body temperature; brain stem or slightly expanded upper end of the spinal cord
- **cranial nerves** – serve each side of the body; twelve pair emerge through openings in the skull, one-half of each pair serving one side of the body
- **sympathetic nerves** – activate "flight or fright" mechanism; react under stress and provide additional energy by increasing heart rate, raising blood pressure, dilating the bronchi, and diverting blood from the digestive area to the muscles
- **parasympathetic nerves** – soothe the resting horse by lowering blood pressure, constricting the bronchi, and increasing digestive activity
- **spinal cord** – performs intermediary function between the brain and other parts of the body
- **brachial plexus** – supplies feeling to each of the forelimbs through a network of nerves
- **lumbo-sacral plexus** – supplies feeling to each of the hindlimbs through a network of nerves

OBJECTIVE 10

Required Activities/
Resources
– Transparency Master 7

Label the parts of the digestive system.

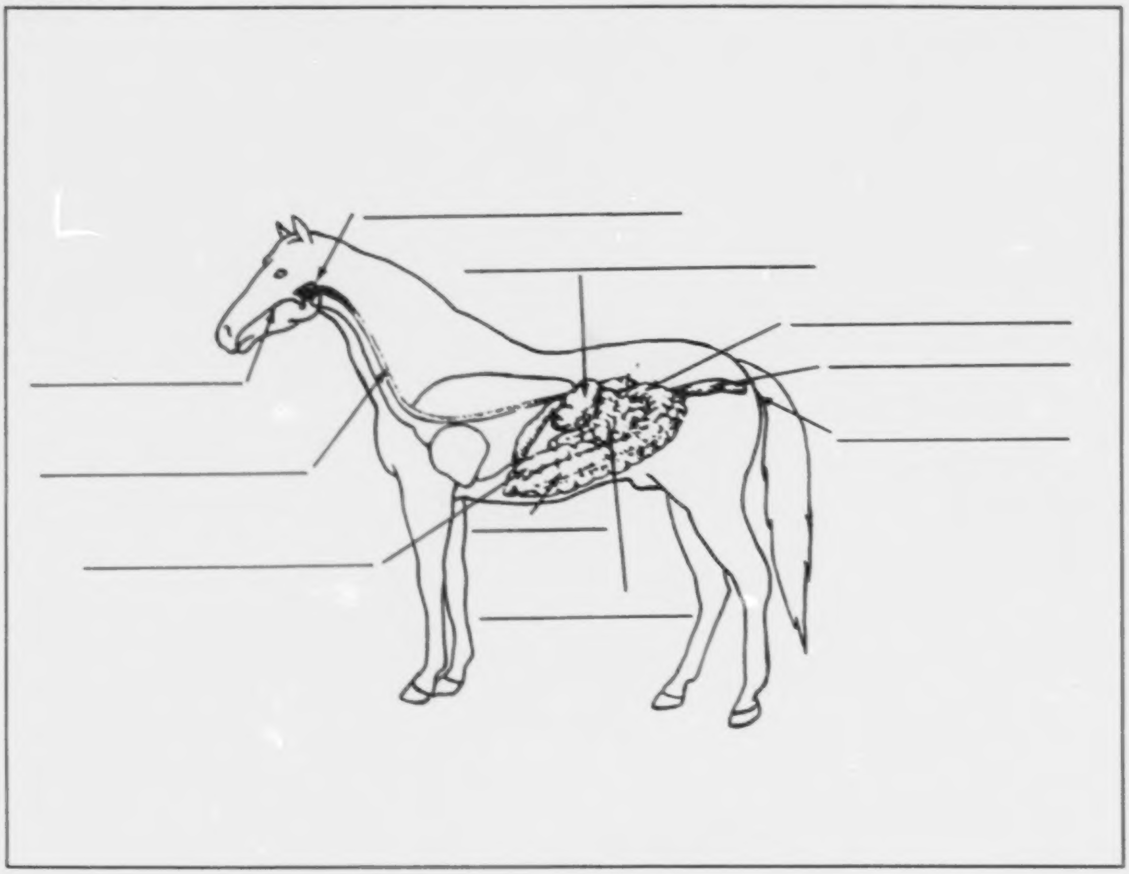
You will see one transparency showing the parts of the digestive system.

As you view the transparency, list these structures in the spaces below.

Pharynx
Cavity of Mouth
Esophagus
Cecum
Large Colon

Stomach
Small Intestine
Small Colon
Rectum
Anus

FIGURE 7



Used by permission of Equine Research, Inc. from *Illustrated Veterinary Encyclopedia for Horseman.*

OBJECTIVE 11

Optional Activities/
Resources in
Instructor's Guide

Match parts of the digestive system to their descriptions.

- **mouth** – chewing mechanism; secretes saliva to act as a digestive juice and to lubricate food for swallowing

- **pharynx** – muscular passage which connects the mouth and the esophagus

- **esophagus** – tube providing passage of food from the pharynx to the stomach

- **stomach** – J-shaped muscular sac between the esophagus and the small intestine that secretes gastric juices by which proteins and fats are broken down

- **small intestine** – provides further breakdown of proteins, fats, and sugars which have escaped the breakdown by gastric juices

- **cecum** – contains mostly fluids; forms fatty acids and some vitamins

  ☑ **NOTE:** The cecum, large colon, small colon, and rectum form the large intestine.

- **large colon** – contains semifluid for digestion which is accomplished mostly by bacterial fermentation and absorption

- **small colon** – contains relatively solid materials which are formed into balls of dung

- **rectum** – holds waste material until it is passed out of the horse's body through the anal opening

OBJECTIVE 12

Required Activities/
Resources
– Transparency Master 8

Label the parts of the reproductive system of the mare.

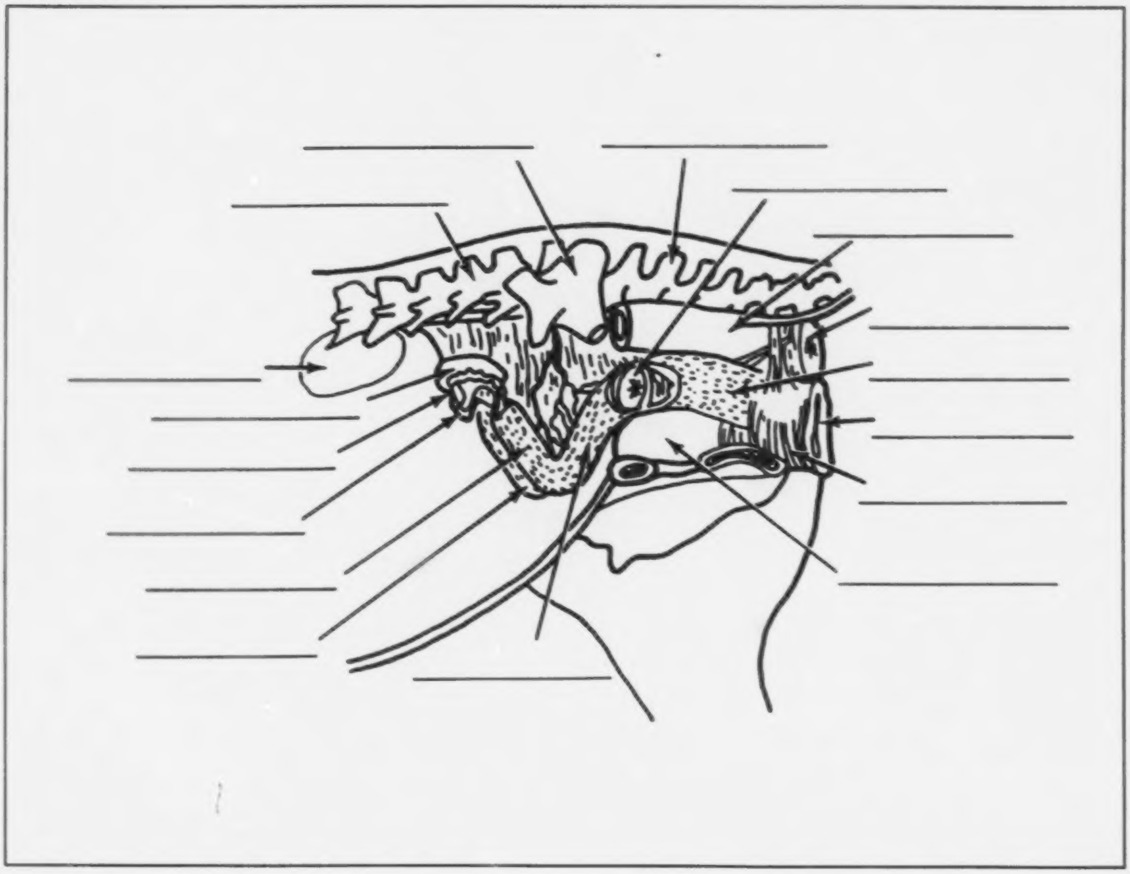
You will see one transparency showing the parts of the reproductive system of the mare.

As you view the transparency, list these structures in the spaces below.

Infundibulum
Fallopian Tube
Ovary
Uterine Horn (left)
Uterine Horn (right)
Body of Uterus
Kidney
Bladder
Cervix

Vagina
Vulva
Rectum
Anus
Labia
Lumbar Vertebra
Pelvis
Sacral Vertebra

FIGURE 8



Used by permission of Equine Research, Inc. from *Breeding Management & Foal Development.*

OBJECTIVE 13

Optional Activities/
Resources in
Instructor's Guide

Match parts of the mare reproductive system to their functions.

- **ovary** – produces ovum and hormones necessary for normal reproductive functioning
- **oviduct** (fallopian tube) – small, paired tubes extending from each ovary to the uterus
- **uterus** – composed of body, horns, and cervix; responsible for accommodating the developing fetus
- **vagina** – forms a sheath for the acceptance of the penis during the breeding process; part of the birth canal between the uterus and the vulva
- **vulva** – external opening of the reproductive system

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OBJECTIVE 14

Required Activities/
Resources
– Transparency Master 9

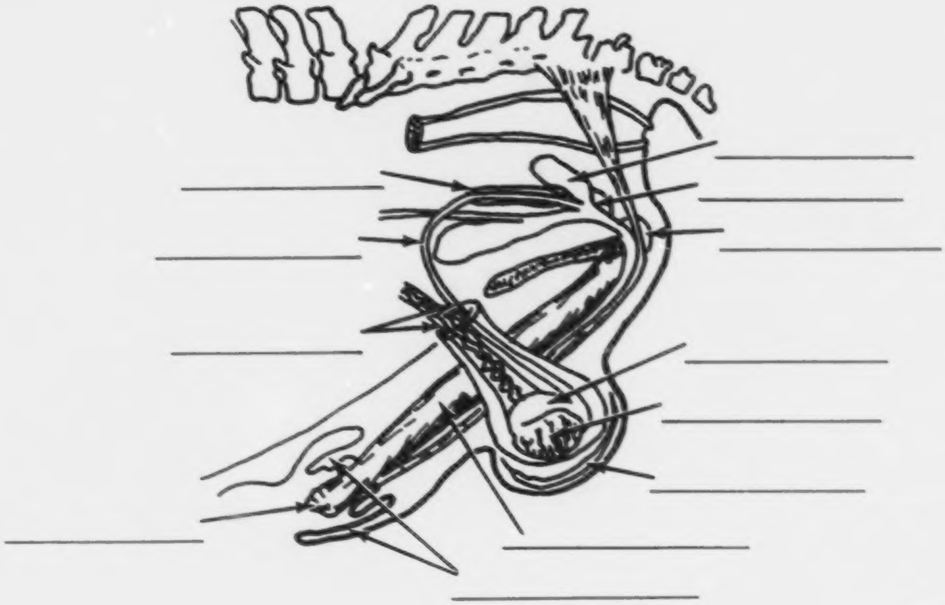
Label the parts of the reproductive system of the stallion.

You will see one transparency showing the reproductive system of the stallion.

As you view the transparency, list these structures in the spaces below.

Bulbourethral Gland
Prostate Gland
Left Seminal Vesicle
Ampulla
Vas Deferens
Spermatic cord
Epididymis
Left Testis
Scrotum
Body of Penis
Glans Penis
Prepuce

FIGURE 8



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OBJECTIVE 15

Optional Activities/
Resources in
Instructor's Guide

Match parts of the stallion reproductive system to their functions.

- **testes** – produce sperm and the male sex hormone, testosterone
- **scrotum** – thin, pliable skin which houses the testes
- **epididymis** – transport tube for sperm from testes to vas deferens
- **vas deferens** – muscular tube propelling sperm during ejaculation
- **urethra** – aids in ejaculation of semen and in expulsion of urine
- **accessory sex glands** – includes ampullae, seminal vesicles, prostate gland, and bulbourethral gland; their main function is to produce the majority of components in semen
- **penis** – external organ used for depositing semen in female reproductive tract

OBJECTIVE 16

Optional Activities/
Resources in
Instructor's Guide

Describe the endocrine system.

WORDS YOU SHOULD KNOW	
endocrinology	the science or study of the endocrine system
vascular system	system composed of blood vessels

- The endocrine system is comprised of a system of ductless glands that influence the following actions:
  - ☐ events surrounding conception
  - ☐ gestation
  - ☐ parturition
  - ☐ digestion
  - ☐ metabolism
  - ☐ growth

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    - puberty
    - aging
    - other physiological functions

- Hormones are secreted directly into the vascular system. Some hormones affect all body tissues while other hormones affect one organ or gland.

- Glands that are considered to be endocrine include the following:
    - pituitary
    - thyroid
    - parathyroid
    - pancreas
    - adrenal
    - gonads
    - placenta
    - pineal
    - thymus

- Endocrine glands produce hormones which stimulate actions in the body.

- Endocrinology is still being researched and many aspects of endocrinology are not yet known.

OBJECTIVE 17

Optional Activities/
Resources in
Instructor's Guide

List characteristics of a healthy horse.

- Contentment

- Bright eyes and alert ears

- Good appetite

- Pliable skin and shiny coat

- Mucous membranes of eyes and lips pink colored and moist
- Normal temperature, pulse, and respiration
- No visible wounds
- Normal feces and urine

☑ **NOTE:** Without a balanced ration the above signs would not be valid.

OBJECTIVE 18

Optional Activities/ Resources in Instructor's Guide

List the vital signs and their normal ranges.

☑ **NOTE:** The ranges given below are for adult horses **at rest**. Factors such as age and exercise may cause the vital signs to vary. Horse owners and caretakers should regularly take the vital signs to determine what is normal for a particular horse. Vital signs that are exceedingly above or below what is normal are cause for concern and the horse should be monitored and a veterinarian consulted.

- **Heart rate** (pulse) – between 28-40 beats per minute

  ☑ **NOTE:** Heart rate may be higher for younger, smaller, and more nervous animals. Factors such as excitement and higher environmental temperature may also cause increases. A heart rate over 80 for an adult horse at rest indicates problems and the horse should be monitored and a veterinarian consulted. The heart rate can be heard with a stethoscope while the pulse rate is palpable.

- **Respiration** – 8-16 breaths per minute

  ☑ **NOTE:** Exercise will cause the respiratory rate to increase. Extensive exercise may cause the rate to increase to around 100 breaths per minute.

  IMPORTANT: If respiration exceeds heart rate call a veterinarian immediately.

- **Temperature** – 99°-101° F

  ☑ **NOTE:** Temperature varies according to age, environmental temperature, exercise, and ration. If a temperature is 102° F (adult horse) the horse has a mild fever and a veterinarian should be consulted.

OBJECTIVE 19

Complete the Job Sheet.

OBJECTIVE 20

Select from a list components essential for maintaining an effective health care program.

Optional Activities/
Resources in
Instructor's Guide

WORDS YOU SHOULD KNOW	
case history	record of disorders, medications, immunizations, and other pertinent information about the horse
health certificate	certification by a veterinarian that the horse is free of disease and injury
immunization	act of injecting a substance into the horse's system which causes resistance to disease

- Checking daily for injuries or disease
- Keeping accurate records
- Organizing immunization program
- Avoiding high risk situations

  EXAMPLE: Barbed wire; mixing mares, stallions, and geldings in the same pasture or paddock

- Being aware of equine diseases and latest research
- Maintaining good nutrition
- Controlling parasites
- Keeping teeth in good condition
- Grooming daily
- Administering hoof care
- Maintaining clean sheaths and udders

OBJECTIVE 21

Optional Activities/
Resources in
Instructor's Guide

List diseases which may be prevented by immunization.

☑ **NOTE:** Check with a veterinarian regarding immunizations and schedules for horses.

WORDS YOU SHOULD KNOW	
encephalomyelitis	viral inflammation of the brain and spinal cord (central nervous system); virus
infectious disease	disease which is capable of being easily spread from one horse to another
influenza	acute viral infection most commonly involving respiratory tract and/or muscular/skeletal system; is very contagious; virus
noninfectious disease	disorder which is not easily spread; caused by disorders of body functions and processes
rhinopneumonitis	inflammation of the nasal and pulmonary mucous membranes; viral origin
strangles	infectious disease characterized by inflammation of respiratory mucous membrane and regional lymph nodes; bacterial origin

- Strangles (Bacterial-Strep infection)
- Tetanus
- Influenza (Virus)
- Encephalomyelitis (eastern, western, and Venezuelan equine encephalomyelitis)
- Rhinopneumonitis (Virus)
- Rabies (Virus)

  ☑ **NOTE:** Rabies has public health significance since horses can give it to humans.

- Potomac horse fever

☑ **NOTE:** Potomac horse fever is significant if the horse is from the east or going east. Potomac horse fever is rare in Oklahoma.

OBJECTIVE 22

Optional Activities/ Resources in Instructor's Guide

Describe treatment of a new horse that has just been purchased or brought on the farm/ranch.

- Require negative equine infectious anemia exam (Coggins test)
- Check health records
- Immunize for diseases not currently covered
- Isolate for period of three weeks
- Deworm if not recently done

OBJECTIVE 23

Optional Activities/ Resources in Instructor's Guide

Complete a chart on infectious diseases.

Start the discussion by asking "What are the causes of the diseases and how might the diseases be prevented?"

WORDS YOU SHOULD KNOW	
Coggins test	blood test for equine infectious anemia
Equine infectious anemia	infectious disease of the blood caused by a virus

Disease	**Symptoms**	**Prevention**	**Treatment**
Equine Influenza	Fever, cough, runny eyes, clear nasal discharge, decreased appetite, stiffness	Vaccination	Isolation, rest and proper nursing care
Anthrax	High fever, swelling on the neck, throat, and lower abdomen, bloody discharges; death	Vaccination in anthrax endemic areas	Antibiotics; quarantine infected horses
Equine encephalomyelitis (sleeping sickness)	High fever, loss of coordination, tongue hanging out, ears and lips drooping, paralysis	Vaccination	Proper nursing care
Equine infectious anemia (swamp fever)	High fever, anemia, weakness, swelling of lower abdomen and legs, weight loss, enlarged spleen, jaundiced	Isolate new horses until negative Coggins test is obtained	No treatment
Pneumonia	Fever, respiratory problems	Good management practices	Antibiotics if bacterial cause
Rabies	Weakness, difficulty walking, paralysis	Vaccination	No treatment
Rhinopneumonitis	Similar to equine influenza	Vaccination	Proper nursing care, treatment of secondary complications
Strangles	Moderate to high fever, loss of appetite, nasal discharge, cough, swollen lymph nodes	Proper hygiene, vaccination	Isolation, proper nursing care, veterinary treatment

Disease	Symptoms	Prevention	Treatment
Equine viral arteritis	Respiratory illness is similar to influenza, redness and swelling of the eyes, loss of appetite, colic, diarrhea, dehydration, abortion	Vaccination	Proper nursing care
Tetanus	Appearance of film over the inner third of the eyes, muscle spasms causing stiffness, tail held out, ears erect, jaw muscles contract and horse can't open mouth	Vaccination	Proper nursing care, veterinary treatment
Potomac Horse Fever	High fever, diarrhea, loss of appetite, apathy, laminitis	Vaccination	Antibiotics, proper nursing care

OBJECTIVE 24

Optional Activities/
Resources in
Instructor's Guide

List means by which infectious diseases are passed from one horse to another.

- Feed containers
- Water containers
- Hypodermic needles
- Close contact
- Airborne

OBJECTIVE 25

Complete a chart on noninfectious diseases.

Optional Activities/
Resources in
Instructor's Guide

Condition	**Cause**	**Symptoms**	**Prevention**	**Treatment**
Colic	Various causes; intestinal parasites, poor feed, moldy feed	Expression of abdominal pain, tail switching, rolling, pawing	Parasite control, proper feeding management	Varies with type of colic; walking, laxatives, analgesics, surgery in some cases
Laminitis (founder)	Excessive intake of feed, drinking large quantities of cold water when overheated, retained placenta	Lameness, heat in hoof, rotation of the coffin bone	Proper feeding management	Acute: immediate veterinary care Chronic: proper foot care, corrective trimming and shoeing
Azoturia and Tying Up Syndrome	Occurs in athletic horses on a ration high in carbohydrates who have stopped exercising	Stiffness, dark colored urine, anxiety, sweating; tying up syndrome is less severe	Reduce diet when inactive	Veterinary care, selenium and vitamin E may prevent recurrent attacks; do NOT walk horse
Roaring	Paralysis of one of the recurrent laryngeal nerves	Noise (whistling sound) during exercise; performs poorly	May be inherited as a simple recessive trait; prevent damage to nerves such as from respiratory infections	Surgery

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Condition	Cause	Symptoms	Prevention	Treatment
Emphysema	Airway obstruction	Chronic bronchitis: chronic cough, shortness of breath Chronic bronchiolitis (heaves): deep dry cough, wheezing, weight loss, increased rate of breathing	Provide fresh air and control dust	Mucolytics and expectorants, vaporizer, control dust, antibiotics for acute infectious relapses

OBJECTIVE 26

Optional Activities/
Resources in
Instructor's Guide

Select from a list items to be recorded in case history.

- Age, breed, color, and sex
- Immunization history
- Past illnesses, injuries, and allergies
- Past medications
- Deworming dates and anthelmintics
- Dental records
- Ration
- Use
- Past ownerships
- Farrier records

OBJECTIVE 27

Complete the Assignment Sheet.

ASSIGNMENT SHEET

HORSE HEALTH AND DISEASE PREVENTION B1

Name ______________________________ Score __________

OBJECTIVE 27

Complete record forms on horse health.

INSTRUCTIONS

Reading Comprehension
- Gain factual information

Functional Reading
- Follow written instructions
- Use content area vocabulary
- Interpret abbreviations/acronyms

Functional Writing
- Complete forms and records

Using the information below and the health forms on the following pages, complete the records on the horse's health.

Use today's date as the date you begin recording information. The horse, Thunder, was purchased 15 days ago for a purchase price of $3,500. Thunder will be used as a trail horse. The horse arrived at the farm/ranch five days ago. The transportation cost was $100.00. Thunder is a sorrel quarter horse gelding that was born May 15, 1991. Thunder is 16 1/2 hands high. Thunder has a star, strip, and snip and also has a freeze brand on his left hip. The Coggins exam was issued 30 days ago. The horse's immunization record for the previous year is as follows:

The owner of Thunder is Jesse Harden of HH Farms, Route 1, Horsetown, OK. The veterinarian is Dr. Susan Maloy. Her number is 555-1245.

Eastern/Western Encephalomyelitis	March 6
Tetanus toxoid	March 6
Strangles	March 6
Rabies	March 6
Influenza	Jan. 10, April 9, July 10, Oct. 10
Rhinopneumonitis	Jan. 10, July 12
Farrier (cost each visit $40.00)	Jan. 6, March 4, May 2, June 28, Aug. 21, Oct. 19, Dec. 16
Attacks of colic (Veterinarian came out and examined the horse and tubed the horse with mineral oil; cost $75.00 each visit)	May 15, Sept. 4
Deworming	Feb. 6, May 5, Aug. 6, Nov. 4

Equine Health Records
Vital Information

Horse's Name ______________________________

Breed ____________________ I.D. Number ____________________

Date Born ____________________

Sex ____________________ Height ____________________

Color ____________________

Markings ______________________________

Thunder is a sorrel quarter horse gelding that is five years old.Last Coggins test date
____

Purchase Price ____________________

Owner Information

____

____

____

Emergency Information

____

____

____

____

Equine Health Records
General Health, Expenses, Observations, Treatments

Horse's Name and I.D. Number ______________________________

Owner's Name ______________________________

Date	Condition/Description	Treatment	Comments

Equine Health Records
Inoculations

Horse's Name and I.D. Number ______________________________

Owner's Name ______________________________

Date	Inoculation	Administered by	Comments

T = Tetanus Toxoid
EEE = Eastern Equine Encephalomyelitis
WEE = Western Equine Encephalomyelitis
VEE = Venezuelan Equine Encephalomyelitis
R = Rhinopneumonitis
I = Influenza
S = Strangles

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Equine Health Records
Worming

Horse's Name and I.D. Number ______________________________

Owner's Name ______________________________

Date	T = Tube P = Paste	Product	Administered by	Comments

JOB
SHEET 1

HORSE HEALTH AND DISEASE PREVENTION

B1

Name ________________________________

OBJECTIVE 19 **Check the vital signs.**

EQUIPMENT AND SUPPLIES

- Horse
- Stethoscope
- Lubricant (such as petroleum jelly)
- Watch with a second hand
- Thermometer
- Clip for thermometer

⚠ **WARNING:** INJURY TO BOTH HORSES AND HUMANS POSSIBLE. Use caution when taking vital signs.

PROCEDURE

Functional Math
- Make measurements

Life Science
- Investigate health issues

HEART RATE (PULSE) Yes No

1. Place the stethoscope just behind the horse's left elbow. ____ ____

   ☑ **NOTE:** To determine the pulse an artery is felt. With a stethoscope the best place to find the heartbeat is just behind the horse's left elbow. An artery that can be felt with the fingertips is located inside the mandible or jawbone.

2. Take the pulse for 15 seconds behind the point of the elbow. ____ ____
3. Multiply by 4 to get the pulse. ____ ____

	Yes	No
RESPIRATION		
4. Take the respiratory rate for 15 seconds by watching the flank or the nostrils. One rise and one fall is equal to one respiration.	____	____
☑ **NOTE:** The abdomen rises and falls with each breath, causing the flanks to move in and out. The nostrils also flare and contract with each breath.		
5. Multiply by 4 to get the respiration.	____	____
TEMPERATURE		
6. Shake the thermometer down to below 95° F.	____	____
7. Lubricate the bulb of the thermometer.	____	____
8. Gently insert the thermometer, bulb first, in the rectum. Using slight pressure, hold the thermometer against the rectal wall.	____	____
9. Attach the clip to the horse's tail.	____	____
10. Leave thermometer in for 3 minutes and then gently remove, wipe it clean and read the temperature.	____	____
11. Wash the thermometer with soap and cool water, dip the thermometer in a disinfectant solution, rinse and store properly.	____	____

SKILL TEST RECORD

EVALUATOR'S COMMENTS

____

____

____

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Key below.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:				
Safety followed	4	3	2	1
Pulse taken	4	3	2	1
Respiration taken	4	3	2	1
Temperature taken	4	3	2	1

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the points in Product Evaluation and divide by the total number of criteria. Circle the rating on the Key.

KEY

4 **Skilled** – Can perform job with no additional training.
3 **Moderately Skilled** – Has performed job during training program; limited additional training may be required.
2 **Limited Skill** – Has performed job during training program; additional training is required to develop skill.
1 **Unskilled** – Is familiar with process, but is unable to perform job.

EVALUATOR'S COMMENTS

____

____

____

OBJECTIVE SHEET

BASIC FIRST AID

B2

INTRODUCTION

Horses are susceptible to many injuries and illnesses. While proper management practices can prevent many injuries and illnesses, they cannot prevent all of them. Horse owners and caretakers should recognize the signs of illness and injury. They should also know basic first aid. Although the equine veterinarian must always be called if the injury or illness needs veterinary care, the horse owner or caretaker must be a knowledgeable and working partner in caring for the horse's health.

PREREQUISITES

Equine Management and Production, Unit A2 "Safety."

FOCUS ASSIGNMENTS

Reading Comprehension
- Gain factual information
- Analyze cause and effect
- Draw conclusions

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition
- Use complete sentences

FOCUS ASSIGNMENTS	
PREREADING:	Read the Handout *Would You Know What To Do?* As you read, pay special attention to the actions taken by the individuals.
WRITING:	Write a short (one paragraph) discussion of the actions the individuals took. Include a brief discussion of whether you think the actions were correct or incorrect and how the injury/illness might have been prevented.

UNIT OBJECTIVE

After completing this unit, you will show the following competencies by mastering the activities on the Assignment and Job Sheets and by scoring at least 85% on the Written Test.

SPECIFIC OBJECTIVES

1. List items for the basic first aid kit.
2. List visual symptoms of abnormal health.
3. Discuss suggestions for basic treatment of wounds.
4. Select from a list basic usages of bandages.
5. Apply medication and bandage. (Job Sheet 1)
6. List symptoms of colic.
7. Describe actions to take before the vet arrives to care for a horse with colic.
8. Distinguish between critical and noncritical injuries and illnesses.
9. Discuss basic care procedures for a horse during time of injury or illness.
10. Analyze critical and noncritical situations and explain appropriate actions to be taken. (Assignment Sheet 1)
11. Analyze case studies and select items from a first aid kit to use in emergency situations. (Assignment Sheet 2)
12. Label intramuscular, subcutaneous, and intravenous injection sites.
13. Fill a syringe. (Job Sheet 2)
14. Give an intramuscular injection. (Job Sheet 3)

INFORMATION SHEET

BASIC FIRST AID

B2

OBJECTIVE 1

Optional Activities/
Resources in
Instructor's Guide

List items for the basic first aid kit.

☑ **NOTE:** Consult with your veterinarian on assembling a first aid kit. The following is a basic list of items found in an equine first aid kit.

RESOURCES

- Emergency numbers

  EXAMPLE: Veterinarian

- Equine first aid book

EQUIPMENT

- Bucket and clean sponge
- Scissors
- Halter and lead rope
- Twitch or lip chain
- Hoof knife
- Hoof tester
- Stethoscope
- Thermometer
- Hypodermic syringes and needles

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MEDICINE

- Antibiotic ointment or spray
- Antibiotics (oral or injectable)

  IMPORTANT: Consult with your veterinarian before administering any antibiotics.

- Tetanus toxoid and tetanus antitoxin

  ☑ **NOTE:** If the horse has been annually vaccinated for tetanus toxoid then tetanus antitoxin is not necessary. However, it should be given to a horse with an obscure vaccination history, if recommended by the veterinarian.

SUPPLIES

- Absorbent cotton
- Tape
- Bandages, including a set of leg wraps

  ☑ **NOTE:** Combine roll and vet wrap are two bandaging materials that are good to keep in the first aid kit.

- Sterile gauze pads
- Tourniquet

OTHER ITEMS

- Rubbing alcohol
- Epsom salts
- Liniment
- Petroleum jelly
- Germicidal soap
- Table salt
- Iodine

OBJECTIVE 2

Optional Activities/
Resources in
Instructor's Guide

List visual symptoms of abnormal health.

- Depression
- Abnormal vital signs

  ☑ **NOTE:** Vital signs include the pulse, respiration, and temperature. Other signs that may indicate abnormal health include poor capillary refill, abnormal gut sounds, and poor skin hydration.

- Mucous membranes discolored
- Discharge from the eyes or nose
- Dull hair coat
- Abnormal cough
- Very loose or very dry feces
- Abnormal urine

  ☑ **NOTE:** Normal urine should be yellow and slightly cloudy.

- Decreased weight

OBJECTIVE 3

Optional Activities/
Resources in
Instructor's Guide

Discuss suggestions for basic treatment of wounds.

WORDS YOU SHOULD KNOW	
artery	a blood vessel that carries blood from the heart to the tissues of the body
proud flesh	excessive scar tissue that has developed on an injured area
vein	a blood vessel that carries blood from the tissues of the body to the heart

- Control the bleeding by applying direct pressure to the wound.

  ☑ **NOTE:** Blood from an artery is bright red and will spurt from the wound; blood from a vein is darker red and will flow from the wound. It is important to stop arterial bleeding immediately since the horse can lose large quantities of blood in a short time from an arterial cut.

- Clean the wound with a saline solution and remove all dirt and foreign matter.

  ☑ **NOTE:** Ensure that your hands are clean before handling the wound on the horse. The wound may be irrigated using physiological saline solution (PSS) or clean tap water. Avoid using cotton to clean the wound since it may leave pieces in the wound.

- Determine the severity of the wound and contact a veterinarian if necessary.

  ☑ **NOTE:** Superficial wounds, such as small skin abrasions, are easily treated by the horse owner or caretaker. Wounds that are deep or incised and may involve injuries to the tendons, bones, joints, or other vital parts should be evaluated by a veterinarian. Wounds on the lower legs are dangerous since they may involve tendons and ligaments. Wounds on the lower leg are also more susceptible to proud flesh.

- Consult a veterinarian on the use of antibiotics and administration of tetanus antitoxin or tetanus booster shot.

- Bandage the wound to protect from dirt or other irritation, if necessary.

  ☑ **NOTE:** Generally, if the wound has adequate blood supply (muscle) the healing will be quicker than an area such as a lower extremity.

OBJECTIVE 4

Optional Activities/
Resources in
Instructor's Guide

Select from a list basic usages of bandages.

☑ **NOTE:** Precautions should be used depending upon the type of wound. Tightness will vary according to purpose and location on the horse's body.

- Stop excessive blood loss
- Provide support for strains, sprains, and fractures
- Protect wounds and maintain wound dressing
- Reduce and control soft tissue swelling
- Support the sound leg when the opposite leg is injured and unable to support weight
- Add protection in hauling

OBJECTIVE 5

Complete Job Sheet 1.

OBJECTIVE 6

Optional Activities/
Resources in
Instructor's Guide

List symptoms of colic.

WORDS YOU SHOULD KNOW	
capillary refill	rate of return of blood to the area; capillary refill time can be taken by pressing a thumb on the horse's gum and then releasing; the blood and normal color should return to the area in about 2 seconds
colic	expression of abdominal pain ☑ **NOTE:** Colic may range from mild colic to moderate or severe colic. The symptoms will be more pronounced as the pain and severity increase

☑ **NOTE:** A common cause of colic is parasites. Improper feeding practices such as overfeeding or abrupt changes in eating patterns can also cause colic. Colic may also be the result of numerous other conditions such as disorders of the reproductive tract. Severe cases of colic often involve loss of the blood supply to a section of intestine, inflammation and infection of the intestine, kinks or twists in the intestine, and partial or complete blockage of the intestine.

- Depression
- Loss of appetite
- Increased pulse, heart rate, and temperature
- Sweating
- Tail-switching
- Looking at, biting, or kicking at the abdomen
- Frequently getting up and lying down
- Pawing
- Rolling
- Straining to pass urine or stool
- Abnormal or absent manure
- Discolored mucus membranes (bright red or bluish)

  ☑ **NOTE:** The normal color of the mucus membranes is pink.

- Poor capillary refill
- Restless or anxious behavior

OBJECTIVE 7

Optional Activities/
Resources in
Instructor's Guide

Describe actions to take before the vet arrives to care for a horse with colic.

IMPORTANT: Remember, colic is a medical emergency and a veterinarian should be consulted regarding treatment for colic.

- Take notes on the horse's condition. Record items such as behavior, eating, vital signs, color of mucus membranes, capillary refill, passage of manure, and any other information that may be useful.

  IMPORTANT: Do NOT rely on your memory for information regarding a case of colic. This information may be valuable to the veterinarian and give an idea of how the horse is progressing.

- After the veterinarian is notified, continue monitoring the horse.
- Walk the horse.
- If the horse is rolling violently, try to move the horse to an area where it will not hurt itself and keep it from complicating the problem.

  ☑ **NOTE:** Violent rolling may cause kinks or twists in the intestine.

OBJECTIVE 8

Optional Activities/
Resources in
Instructor's Guide

Distinguish between critical and noncritical injuries and illnesses.

- Critical situations which require immediate attention of veterinarian:
  - ☐ Profuse bleeding from an artery or vein

    ☑ **NOTE:** An artery is a blood vessel which carries blood from the heart to various parts of the body. A vein carries blood from the various parts of the body to the heart.

  - ☐ Acute abdominal pain in which the animal wants to roll or kick and/or bite at abdomen
  - ☐ Acute lameness in which the animal is able to move only with great pain

  - Lameness in both front feet

    IMPORTANT: If the horse is lame in both front feet, this may be an indication of founder or laminitis. A veterinarian should be contacted **immediately**.

  - Abnormal foaling

    ☑ **NOTE:** The foal should be delivered within 20 minutes after water breaks. Malpresentations also require immediate veterinary attention.

  - Any situation which might permanently affect the horse in a detrimental manner

    EXAMPLE: Diarrhea, difficult urination, injuries in or around the eye area

- Noncritical factors which do not require immediate veterinary attention but need close supervision:

  - The horse is off feed for a 12-hour period
  - Slight lameness in one foot
  - Superficial wound
  - Swelling in lower limb
  - Runny nose and cough

OBJECTIVE 9

Discuss basic care procedures for a horse during time of injury or illness.

Optional Activities/
Resources in
Instructor's Guide

IMPORTANT: Consult with a veterinarian regarding treatment for a horse during time of injury or illness.

- Allow the horse as much rest as possible.

- Provide a clean, roomy, well-bedded stall, unless the injury prevents, that is free from draft and dampness.

  ☑ **NOTE:** Keep stalls clean and free of manure and urine. Cleanliness helps in the healing process.

- Quarantine a horse with a contagious disease.

- Disinfect facilities and equipment after use.
- Provide palatable feed and fresh water.
- Keep the horse comfortable during extreme hot and cold temperature.
- Apply and administer medications according to a veterinarian's directions.
- Check vital signs for adverse change.

OBJECTIVE 10 **Complete Assignment Sheet 1.**

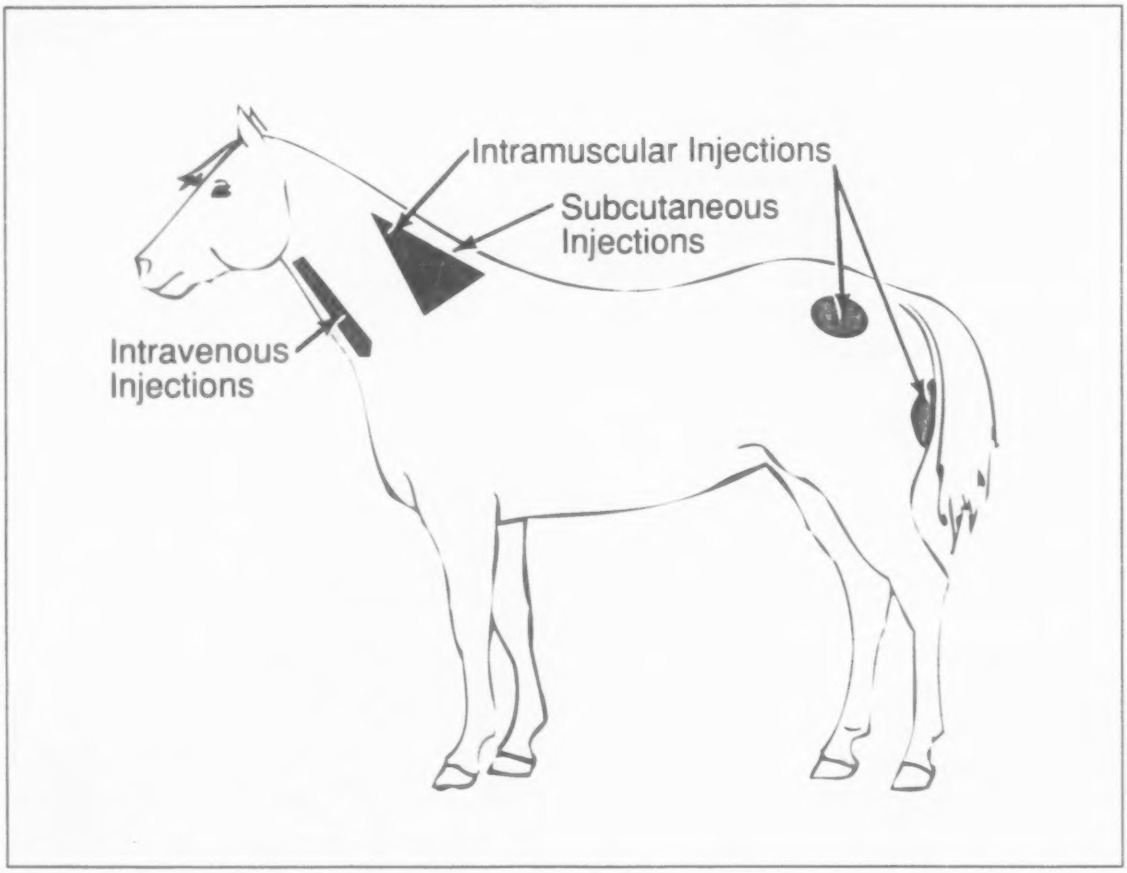
OBJECTIVE 11 **Complete Assignment Sheet 2.**

OBJECTIVE 12 **Label intramuscular and subcutaneous injection sites.**

Optional Activities/ Resources in Instructor's Guide

- Intramuscular injection – given in the muscle
- Intravenous injection – given in the jugular vein
- Subcutaneous injection – given beneath the fold of the skin on the neck

FIGURE 1


Intramuscular Injections
Subcutaneous Injections
Intravenous Injections

OBJECTIVE 13 **Complete Job Sheet 2.**

OBJECTIVE 14 **Complete Job Sheet 3.**

ASSIGNMENT
SHEET 1

BASIC FIRST AID

B2

Name ______________________________ Score __________

OBJECTIVE 10

Analyze critical and noncritical situations and explain appropriate actions to be taken.

INSTRUCTIONS

Read the scenarios below and explain appropriate actions to be taken. Include a brief discussion of whether or not you would consider the situation critical (in immediate need of veterinary attention).

1. The horse is biting and/or kicking at its abdomen, trying to lie down and roll and exhibiting signs of pain.

2. The horse has a laceration of the left forearm which is not deep enough for suturing.

3. The horse did not eat from the last feeding which was twelve hours ago.

Reading Comprehension
- Gain factual information
- Analyze cause and effect
- Draw conclusions

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition
- Use complete sentences

Life Science
- Investigate health issues

4. The horse is slightly lame in its left rear foot.

5. The horse has a temperature of 104° F.

6. The horse is lame in both front feet.

7. The horse is spurting blood from the cannon area of its right front leg.

8. A mare is foaling and the water broke twenty minutes ago. The foal has not appeared.

ASSIGNMENT SHEET 2 — BASIC FIRST AID — B2

Name ______________________________ Score __________

OBJECTIVE 11

Analyze case studies and select items from a first aid kit to use in emergency situations.

INSTRUCTIONS

Read the scenarios below, write a brief discussion of the items to be used from the first aid kit and what actions you would take.

Reading Comprehension
- Gain factual information
- Analyze cause and effect
- Draw conclusions

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition
- Use complete sentences

Life Science
- Investigate health issues

Case 1

A three-year-old gelding has gotten into barbed wire. He has a deep cut to the tendon just above his hoof.

____

____

____

Case 2

A 15-year-old mare has a runny nose and discharge from her eyes. She looks depressed. You decide to take her vital signs.

____

____

____

Case 3

A ten-year-old gelding has a cut on his lower leg which is still bleeding. The leg will need to be bandaged to protect the cut.

JOB
SHEET 1

BASIC FIRST AID

B2

Name ________________________________

OBJECTIVE 5

Apply medication and bandage.

EQUIPMENT AND SUPPLIES

- Medication
- Combine roll
- Vet wrap
- Gauze padding (4 x 4)

WARNING: INJURY TO BOTH HORSES AND HUMANS POSSIBLE. Use caution when bandaging.

PROCEDURE

Yes No

1. Position yourself with safety in mind before beginning the procedure. ____ ____

2. Apply medication to gauze padding and place over the wound. ____ ____

3. Apply combine roll to the leg; start on the inside of the leg and wrap outward toward the head. Smooth out for final wrap. ____ ____

4. Place the vet wrap under the last portion of the combine roll. ____ ____

5. Wrap the vet wrap downward and then back to the top. Overlap each wrap approximately one-half of the last wrap. ____ ____

☑ **NOTE:** Do NOT wrap the vet wrap too tightly. If the wrap is too tight it can strangulate the leg.

6. Leave 1/4" of combine roll at the top and bottom of the wrap. ____ ____

Functional Reading
- Follow written instructions

Life Science
- Investigate health issues

Job Acquisition/ Development
- Master specific job task/procedure

SKILL TEST RECORD

EVALUATOR'S COMMENTS

____

____

____

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Key below.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:

Safety followed	4	3	2	1
Correct tightness	4	3	2	1
Correct wrapping procedure	4	3	2	1
Medication applied	4	3	2	1

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the points in Product Evaluation and divide by the total number of criteria. Circle the rating on the Key.

KEY

4 **Skilled** – Can perform job with no additional training.
3 **Moderately Skilled** – Has performed job during training program; limited additional training may be required.
2 **Limited Skill** – Has performed job during training program; additional training is required to develop skill.
1 **Unskilled** – Is familiar with process, but is unable to perform job.

EVALUATOR'S COMMENTS

769

JOB SHEET 2 — BASIC FIRST AID — B2

Name ______________________________

OBJECTIVE 13

Fill a syringe.

EQUIPMENT AND SUPPLIES

- Clean hypodermic syringe
- Disposable hypodermic needle

☑ **NOTE:** Different sizes may be used, but for this procedure a 12 cc hypodermic syringe and an 18 gauge 1 1/2" hypodermic needle are recommended.

- Bottle or vial of drugs

☑ **NOTE:** For practice, an emptied bottle filled with sterile saline solution may be used.

PROCEDURE

Functional Reading
- Follow written instructions

General Science
- Use scientific instruments

Job Acquisition/ Development
- Master specific job task/procedure

Yes No

1. Inject a small amount of air into the bottle of drug through the rubber seal which has been cleansed with alcohol. ____ ____

☑ **NOTE:** Alcohol has little disinfecting power but does help clean the seal.

2. Hold the vial upside down or at a steep angle with needle inserted. ____ ____

☑ **NOTE:** Make sure that the needle is not in air pocket.

3. Pull the plunger back until it is a little above the mark for the amount of drug needed. ____ ____

EXAMPLE: If 12 cc are needed, withdraw 13 cc.

4. Give the syringe a few gentle taps on the side to dislodge air bubbles. ____ ____

5. Push the plunger down just enough to expel air and the extra medicine in the syringe; pull the syringe and needle straight out of the vial. Yes ____ No ____

SKILL TEST RECORD

EVALUATOR'S COMMENTS

____

____

____

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Key below.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:

Correct amount filled	4	3	2	1
Air bubbles dislodged	4	3	2	1
Syringe and needle ready for injection	4	3	2	1

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the points in Product Evaluation and divide by the total number of criteria. Circle the rating on the Key.

KEY

- 4 **Skilled** – Can perform job with no additional training.
- 3 **Moderately Skilled** – Has performed job during training program; limited additional training may be required.
- 2 **Limited Skill** – Has performed job during training program; additional training is required to develop skill.
- 1 **Unskilled** – Is familiar with process, but is unable to perform job.

EVALUATOR'S COMMENTS ____

____

____

JOB
SHEET 3

BASIC FIRST AID

B2

Name ______________________________

OBJECTIVE 14

Give an intramuscular injection.

EQUIPMENT AND SUPPLIES

- 20 cc syringe and 20 gauge 1" or 1 1/2" disposable needle
- Horse for injection
- Drug for injection
- Antiseptic cleanser or alcohol

⚠ **WARNING:** INJURY TO BOTH HORSES AND HUMANS POSSIBLE. Use caution when giving injections.

PROCEDURE

Functional Reading
- Follow written instructions

Life Science
- Investigate health issues

Job Acquisition/ Development
- Master specific job task/procedure

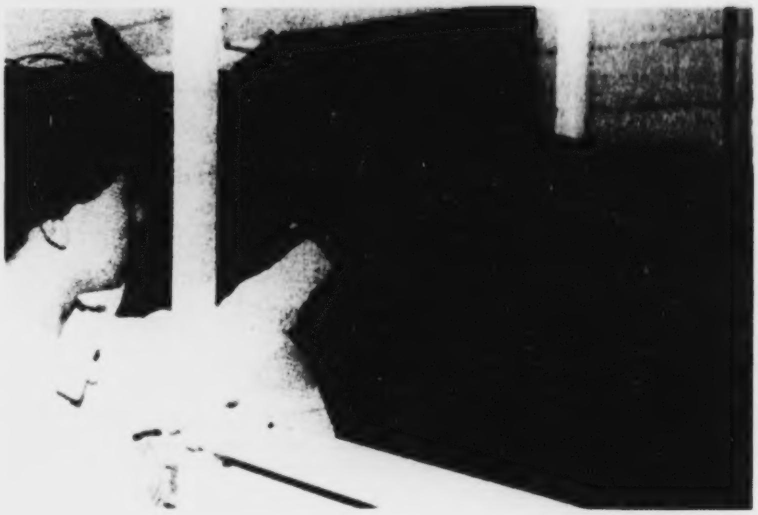
	Yes	No
1. Apply cleanser to the area of application.	____	____
2. Pinch the skin in the area where the needle will be inserted. (Figure 1)	____	____

☑ **NOTE:** Always use a new sterile needle and clean the top of the bottle with alcohol.

☑ **NOTE:** Pinching the skin works on the neck area but does not work well on other injection sites.

Yes No

FIGURE 1



3. Insert needle while pinching the skin. ____ ____

4. Disconnect needle from syringe and pull back on plunger (aspirate). Be certain that no blood is present; if you do get blood, withdraw the needle and start over. ____ ____

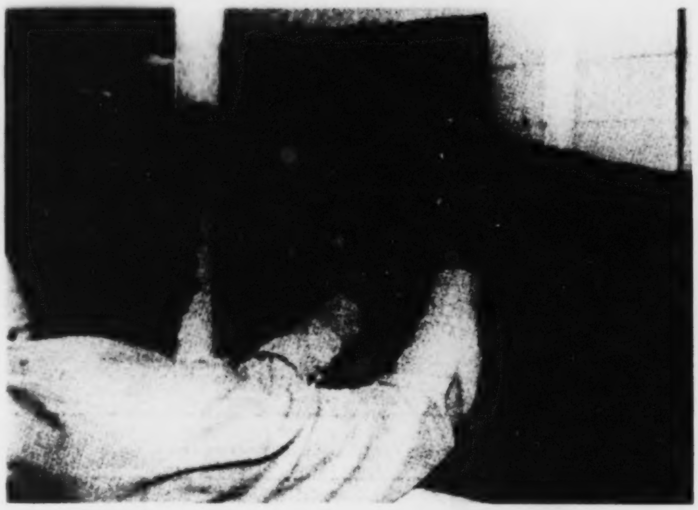
5. Hold needle between thumb and index finger. ____ ____

6. Thump area for injection a few times with the side of the hand, driving the needle in on the final thump. ____ ____

7. Connect syringe and needle and administer injection. (Figure 2) ____ ____

   IMPORTANT: Before depressing the plunger of the syringe to give the injection, the plunger should be aspirated to see if any blood is present in the syringe. Only administer 12 to 15 cc of substance at any one injection site.

FIGURE 2



SKILL TEST RECORD

EVALUATOR'S COMMENTS

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Key below.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:

Safety followed		4	3	2	1
Correct injection site		4	3	2	1
Injection administered correctly	775	4	3	2	1

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the points in Product Evaluation and divide by the total number of criteria. Circle the rating on the Key.

KEY

4 **Skilled** – Can perform job with no additional training.
3 **Moderately Skilled** – Has performed job during training program; limited additional training may be required.
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1 **Unskilled** – Is familiar with process, but is unable to perform job.

EVALUATOR'S COMMENTS

____

____

____

OBJECTIVE SHEET *PARASITES* B3

INTRODUCTION

All horses are susceptible to parasites and both preventive and control measures should be taken. If left untreated some internal parasites can cause injury to the horse's lungs, liver, blood vessels, intestines and other organs which can cause irreversible damage or even death. Digestive disorders such as colic can be caused by internal parasites. External parasites irritate horses, cause sores which may become infected, and infect horses with diseases. Understanding internal and external parasites is essential to implementing both preventive and control measures and maintaining the horse's health.

PREREQUISITES

None

FOCUS ASSIGNMENTS

Reading Comprehension
- Gain factual information
- Analyze cause and effect
- Draw conclusions

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition
- Use complete sentences

FOCUS ASSIGNMENTS	
PREREADING:	Read the Handout *Parasites*. As you read, pay special attention to what can happen if parasites are not controlled.
WRITING:	Write a short (one paragraph) summary on how parasites affect horses and why horse owners and caretakers should know about parasites and how to control and prevent them.

UNIT OBJECTIVE

After completing this unit, you will show the following competencies by mastering the activities on the Assignment Sheets and by scoring at least 85% on the Written Test.

SPECIFIC OBJECTIVES

1. Select from a list general symptoms of parasitic infection.
2. Classify parasites as internal or external.
3. Match internal parasites to their description.
4. Identify external parasites.
5. Complete a chart on common external parasites.
6. Describe the steps in life cycles of internal parasites.
7. Select from a list families of drugs effective against internal and external parasites.
8. List guidelines for the use of anthelmintics.
9. Describe safety procedures when using insecticides and anthelmintics.
10. Use proper handling and disposal techniques for insecticides and anthelmintics. (Assignment Sheet 1)
11. List management practices used in prevention of parasitism.
12. Analyze case studies for factors that affect susceptibility of horses to parasites. (Assignment Sheet 2)

INFORMATION SHEET

PARASITES

B3

OBJECTIVE 1

Optional Activities/ Resources in Instructor's Guide

Select from a list general symptoms of parasitic infection.

- Weakness
- Unhealthy appearance
- Poor hair coat
- Inability to gain or maintain weight
- Distended belly with ribs showing (potbelly)
- Tucked up flanks
- Stunted growth and development in young horses
- Colic, diarrhea, cough, and lameness in severe cases
- Rubbing, itching or biting

OBJECTIVE 2

Optional Activities/ Resources in Instructor's Guide

Classify parasites as internal or external.

INTERNAL

- Bots
- Strongyles (bloodworms)
- Ascarids (roundworms)
- Pinworms
- Strongyloides (threadworms)
- Tapeworms
- Habronema (stomach worms)

EXTERNAL

- Flies
- Lice
- Mites
- Ticks
- Mosquitoes
- Gnats

OBJECTIVE 3

Optional Activities/
Resources in
Instructor's Guide

Match internal parasites to their description.

- **bots** – larvae of the botfly; eggs are deposited on the horse by the fly, mainly on the inside of the knees and under the abdomen, and may migrate to internal parts of horse's body

  ☑ **NOTE:** Botflies are active from the beginning of summer to the first hard frost of winter. Botflies are mostly abundant in early fall (middle of September in Oklahoma).

- **strongyles** – intestinal worms that lay eggs in the small intestine; divided into large and small; large worms migrate to various organs and tissues and do extensive damage

  ☑ **NOTE:** There are many species of strongyles. Large strongyles present the most serious health threat to horses.

- **ascarids** – intestinal round worms; largest parasite of the horse; can achieve a length of 25 cm or greater

  ☑ **NOTE:** Ascarids are primarily a problem in foals and weanlings. Mature horses are rarely affected.

- **pinworms** – parasites of the colon; eggs are laid by the female on the skin surrounding the anus cause intense itching and result in tail rubbing and loss of hair

- **strongyloides** – intestinal threadworms that affect foals up to six months of age

- **tapeworms** – small worms that tend to form clusters at the valve region of the cecum; rarely cause problems unless present in exaggerated numbers

- **habronema** – stomach worms that are responsible for inflammation in the stomach and/or for a condition of external sores referred to as "summer sores"

☑ **NOTE:** Lungworms, although not common, can occur in horses and produce pulmonary problems. Burros and donkeys appear to be the natural host for lungworms but seldom show effects of infection.

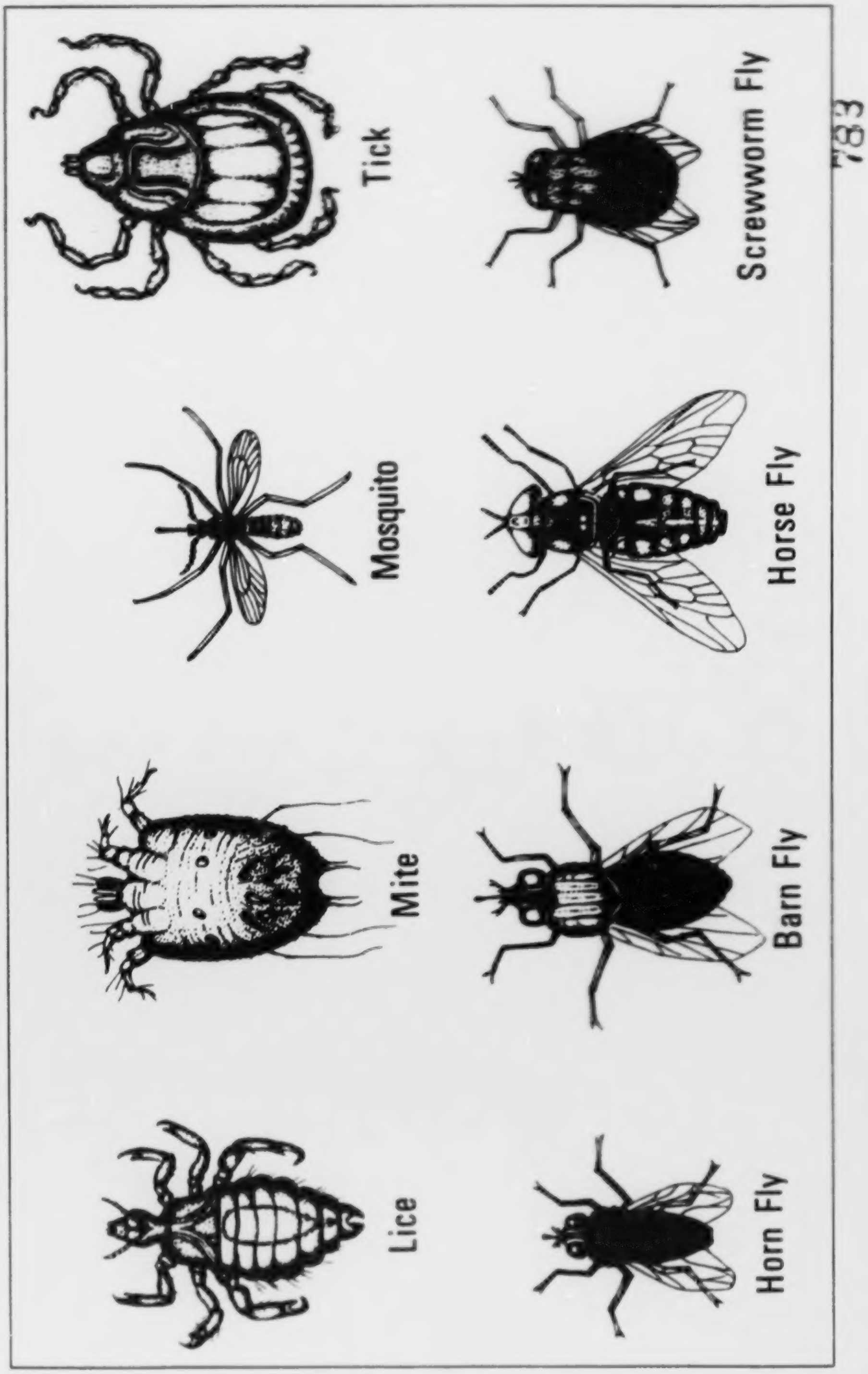
OBJECTIVE 4

Required Activities/
Resources
– Transparency Master 1

Optional Activities/
Resources in
Instructor's Guide

Identify external parasites.

FIGURE 1


Tick
Screwworm Fly
Mosquito
Horse Fly
Mite
Barn Fly
Lice
Horn Fly

OBJECTIVE 5

Optional Activities/
Resources in
Instructor's Guide

Complete a chart on common external parasites.

PARASITE	PROBLEMS	BREEDING AREAS	CONTROL
House fly (non-biting)	Carries infectious diseases and stomach worms; feeds on secretions from facial areas	Manure, decomposing matter	Insecticides, fly baits; sanitation
Face fly (non-biting)	Feeds on secretions from facial areas or wounds; transmits eyeworms	Cow manure	Insecticides; treated halters
Stable fly (biting)	Carries infectious diseases and stomach worms; bites	Manure, also decomposing matter	Insecticide sprays; sanitation
Horse fly	Transmits equine infectious anemia; bites severely	Moist, decaying matter near standing water	Insecticides; difficult to control
Horn fly	Bite	Cow manure	Insecticide; separate horses from cattle
Bot fly	Lay eggs on hair leading to stomach bots	Eggs deposited on hair; larvae pupate in manure	Oral anthelmintics
Lice	Itching, hair loss, scabs and sores on skin; suck blood or feed on skin debris	Eggs attached to hair	Insecticides, Ivermectin; washing of tack items
Mites	Mange	On animal	Quarantine of affected horses; insecticide; ivermectin
Ticks	Carry diseases; heavy infestations lead to weakness and anemia, bite	Protected areas; on animal	Removal; insecticide, Ivermectin
Mosquitoes	Transmits equine encephalitides	Water (ponds, ditches, troughs)	Insecticides; eliminating standing water
Gnats	Irritation, scabs and blisters, hair loss; blood loss	Varies widely (control of breeding areas is impractical)	Insecticides; stabling

OBJECTIVE 6

Required Activities/
Resources
– Transparency Masters
2-6

Optional Activities/
Resources in
Instructor's Guide

Describe the steps in life cycles of internal parasites.

BOTS (Figure 2)

☑ **NOTE:** The life cycle below is for common botflies, *Gasterophilus intestinalis*. The life cycles of the throat or chin botfly, *G. nasalis*, and the nose botfly, *G. hemorrhoidalis*, are slightly different.

1. Female flies deposit small yellow eggs primarily on the hairs of the chest and forelegs.
2. The eggs hatch when exposed to the moisture, warmth, and friction of the mouth.

   ☑ **NOTE:** This will occur when the horse licks the area where bot eggs are deposited.

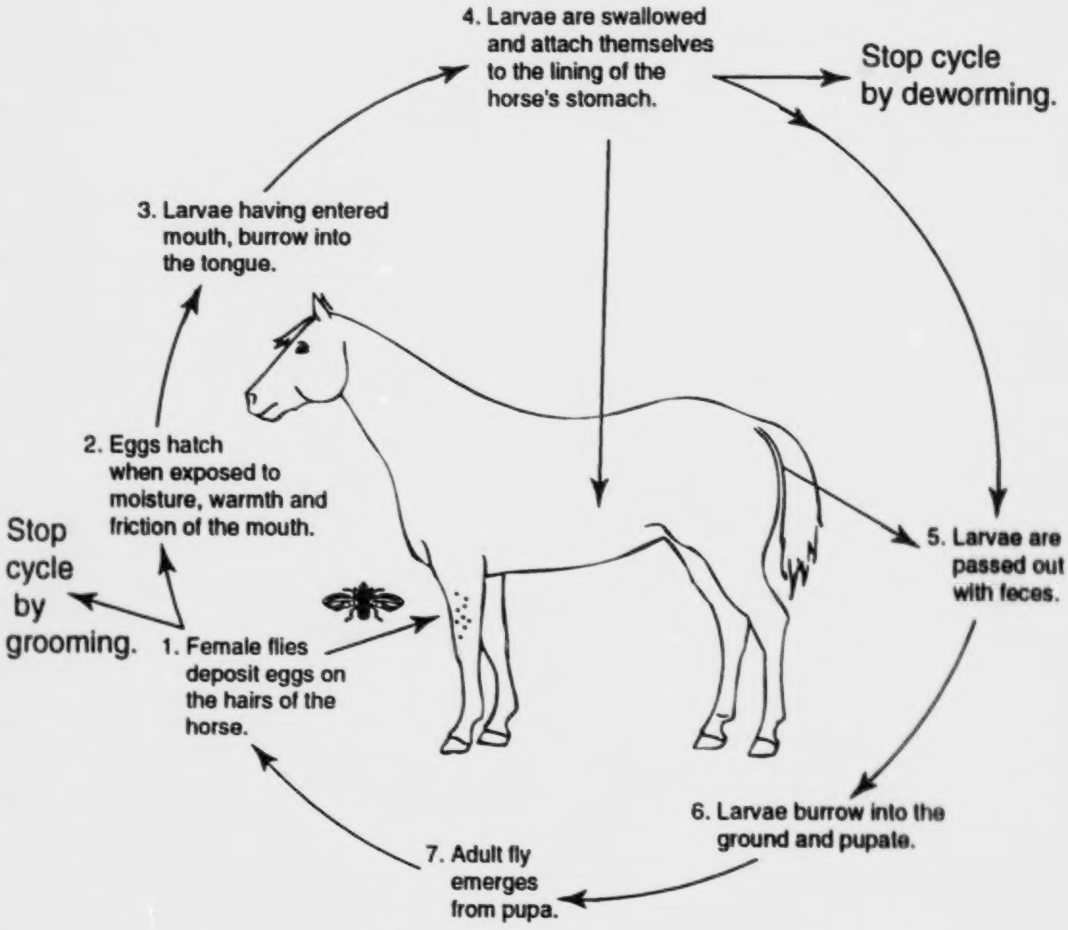
3. The larvae having entered the mouth burrow into the tongue.
4. The larvae are eventually swallowed and attach themselves to the lining of the horse's stomach where they grow to maturity.

   ☑ **NOTE:** Bots spend about ten months attached to the stomach lining.

5. The larvae detach from the stomach upon maturity and are passed out with feces.
6. Larvae burrow into the ground and pupate.
7. Adult fly emerges from pupa.

FIGURE 2

Bots



1. Female flies deposit eggs on the hairs of the horse.
2. Eggs hatch when exposed to moisture, warmth and friction of the mouth.
3. Larvae having entered mouth, burrow into the tongue.
4. Larvae are swallowed and attach themselves to the lining of the horse's stomach.
5. Larvae are passed out with feces.
6. Larvae burrow into the ground and pupate.
7. Adult fly emerges from pupa.

STRONGYLES (Bloodworms) (Figure 3)

☑ **NOTE:** Strongyles present the most serious and damaging threat to the horse's health. Strongyles are divided into two groups called *large strongyles* and *small strongyles*. Large strongyles present the greatest health threat to horses since they migrate through the horse's circulation and damage blood vessels. Small strongyle do not migrate from the small intestine.

1. Eggs are laid by the adult worm in the intestine.

2. Eggs are passed in feces and in one to two days hatch into larvae.

3. Larvae feed on manure and develop;

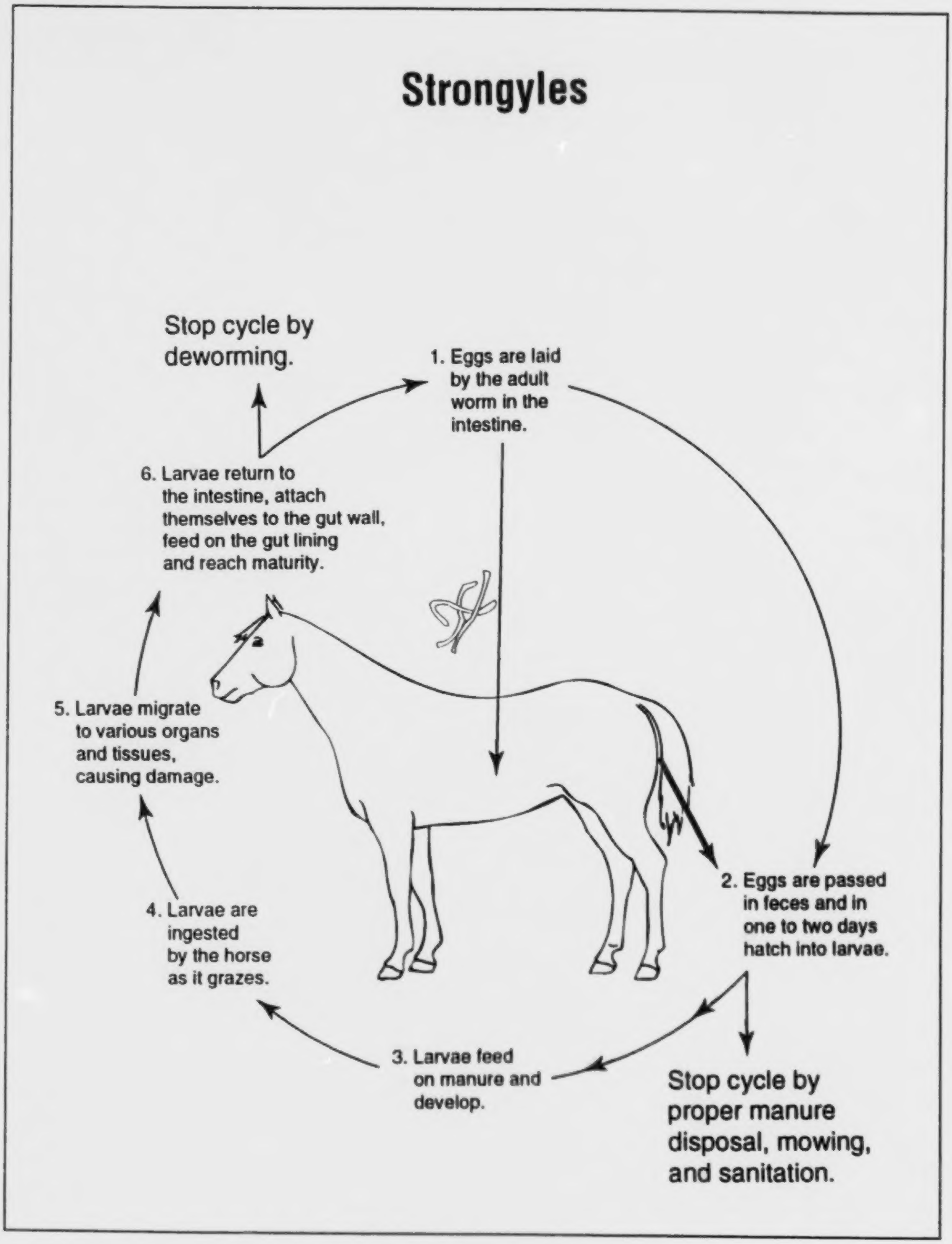
4. After about a week larvae become infective and are ingested by the horse as it grazes.

5. The larvae migrate to various organs and tissues, causing damage.

   ☑ **NOTE:** Small strongyle do not migrate from the small intestine. Large strongyle may live in the arteries around five months.

6. Larvae return to the intestine and attach themselves to the gut wall, feed on the gut lining and reach maturity.

FIGURE 3



Strongyles

1. Eggs are laid by the adult worm in the intestine.

2. Eggs are passed in feces and in one to two days hatch into larvae.

3. Larvae feed on manure and develop.

4. Larvae are ingested by the horse as it grazes.

5. Larvae migrate to various organs and tissues, causing damage.

6. Larvae return to the intestine, attach themselves to the gut wall, feed on the gut lining and reach maturity.

Stop cycle by deworming.

Stop cycle by proper manure disposal, mowing, and sanitation.

ASCARIDS (Roundworms) (Figure 4)

☑ **NOTE:** Ascarids are mainly a problem in younger horses and rarely occurs in older horses since they develop an immunity to them.

1. Adult female worm lays eggs in the small intestine.

2. Eggs are passed in feces.

3. Eggs develop to an infective stage.

   ☑ **NOTE:** These eggs are very resistant to environmental factors and can remain inactive for months or even years.

4. The horse ingests eggs as it eats grass, feed, feces, or drinks water.

5. The eggs hatch in the small intestine and produce larvae which penetrate the wall of the gut.

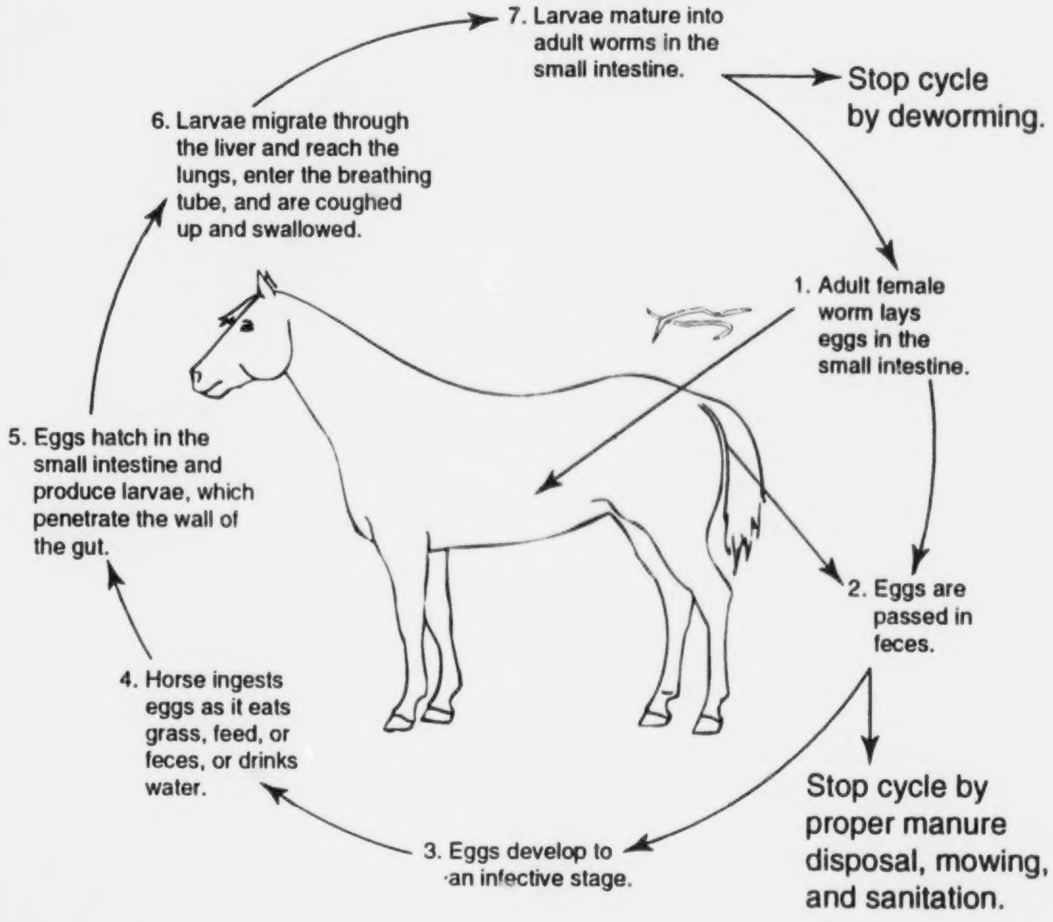
6. Larvae migrate through the liver and reach the lungs, enter the breathing tube, and are coughed up and swallowed.

7. Larvae mature into adult worms in the small intestine.

   ☑ **NOTE:** The life cycle takes approximately 10-12 weeks.

FIGURE 4

Ascarids



7. Larvae mature into adult worms in the small intestine.

Stop cycle by deworming.

1. Adult female worm lays eggs in the small intestine.

2. Eggs are passed in feces.

Stop cycle by proper manure disposal, mowing, and sanitation.

3. Eggs develop to an infective stage.

4. Horse ingests eggs as it eats grass, feed, or feces, or drinks water.

5. Eggs hatch in the small intestine and produce larvae, which penetrate the wall of the gut.

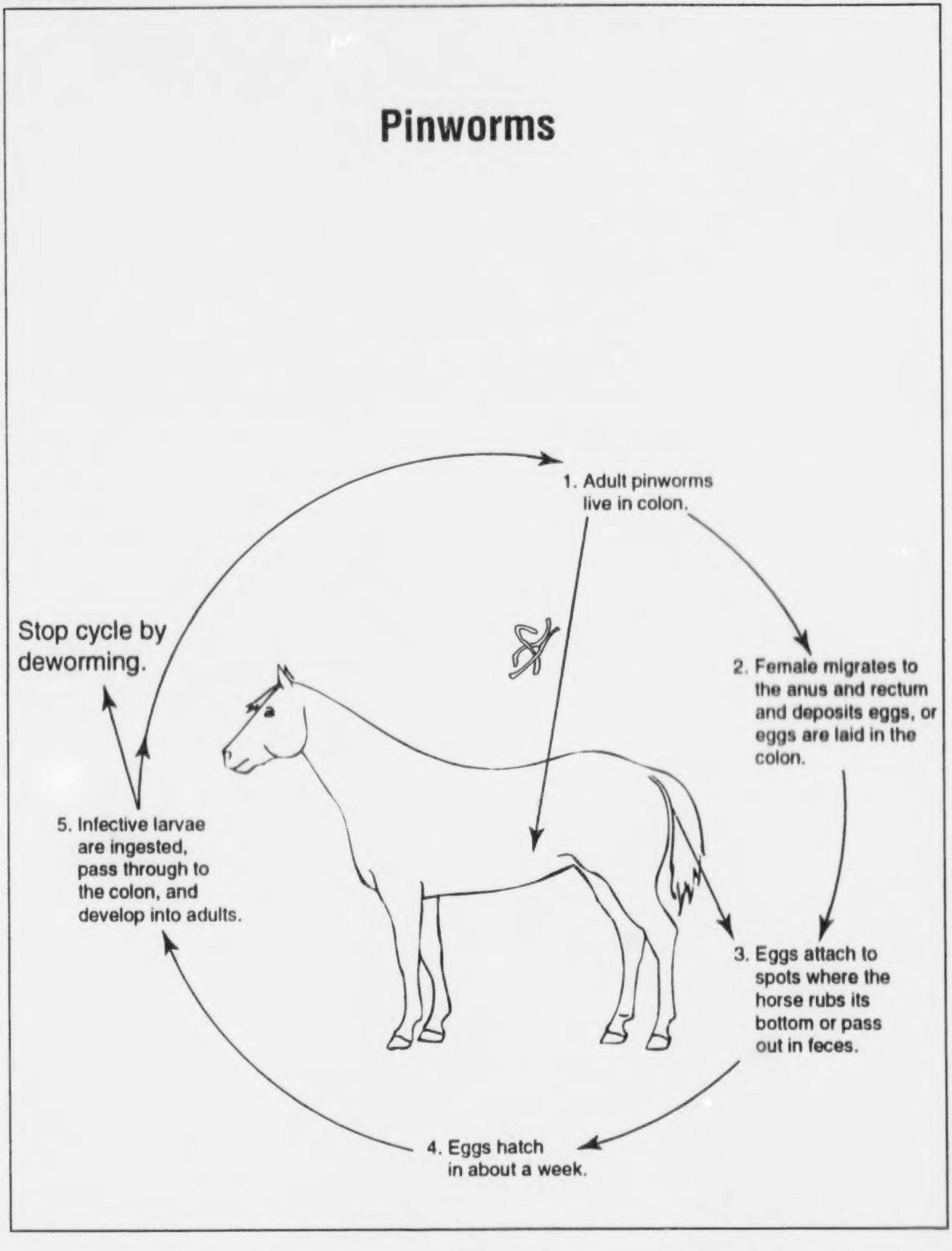
6. Larvae migrate through the liver and reach the lungs, enter the breathing tube, and are coughed up and swallowed.

PINWORMS (Figure 5)

1. Adult pinworm lives in the colon.
2. Female migrates to the anus and rectum and deposits eggs, or eggs are laid in the colon.
3. The eggs are sticky and attach to spots where the horse rubs its bottom such as fences or bedding or pass out with feces.
4. Eggs hatch in about a week.
5. Infective larvae are ingested, pass through to the colon, and develop into adults.

☑ **NOTE:** The life cycle is completed in about eight weeks.

FIGURE 5


Pinworms
1. Adult pinworms live in colon.
2. Female migrates to the anus and rectum and deposits eggs, or eggs are laid in the colon.
3. Eggs attach to spots where the horse rubs its bottom or pass out in feces.
4. Eggs hatch in about a week.
5. Infective larvae are ingested, pass through to the colon, and develop into adults.
Stop cycle by deworming.

STRONGYLOIDES (Threadworms)

☑ **NOTE:** Strongyloides (*Strongyloides westeri*) are primarily a problem in young foals, they do not produce illness in adult horses.

1. Eggs are ingested by the horse in feces or can be transmitted by mare's milk or direct penetration of skin in very young foals.
2. Larvae migrate to the lungs and return to the intestines.
3. Mature into adult worms in the intestine.

   ☑ **NOTE:** The life cycle may be completed in 2 weeks. Threadworms can cause diarrhea in foals.

TAPEWORMS

1. Adult worms develop in the large and small intestine of the horse.
2. Eggs are passed in the feces.
3. Eggs are ingested by an intermediate host (a mite which lives in pasture).
4. The horse acquires tapeworm by eating an infected mite.

   ☑ **NOTE:** The life cycle takes 4-8 months.

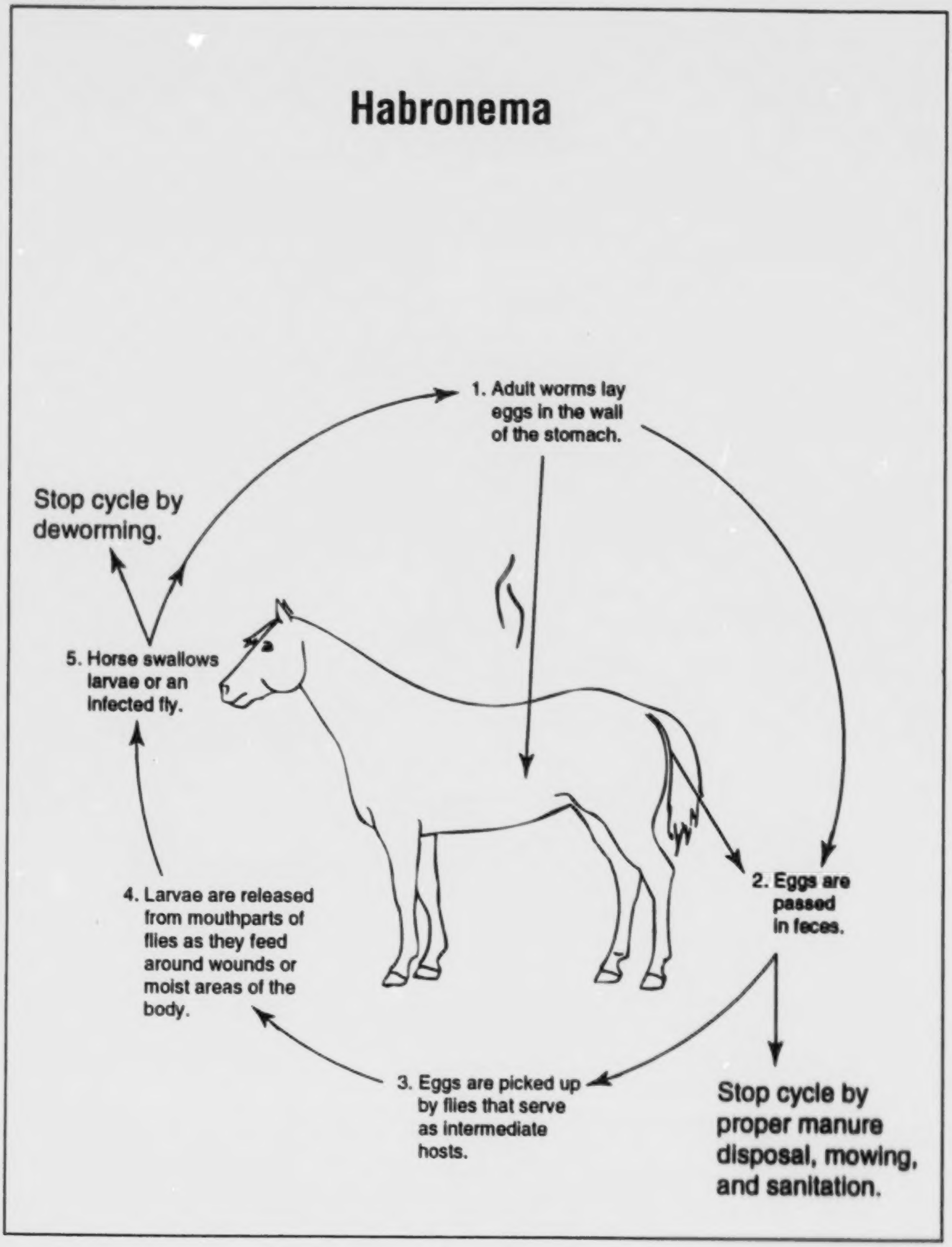
HABRONEMA (Stomach worms) (Figure 6)

1. Adult worms lay eggs in the wall of the stomach.
2. Eggs are passed in feces.
3. Eggs are picked up by flies which serve as intermediate hosts.
4. Larvae are released from mouthparts of flies as they feed around wounds or moist areas of the body.

   ☑ **NOTE:** The larvae are responsible for the skin condition called *summer sores.* A summer sore is an open wound or sore that grows rapidly, ulcerates, and is covered with a reddish-yellow tissue which bleeds easily. The horse will have severe itching.

5. The horse swallows larvae or an infected fly.

FIGURE 6



Habronema

1. Adult worms lay eggs in the wall of the stomach.
2. Eggs are passed in feces.
Stop cycle by proper manure disposal, mowing, and sanitation.
3. Eggs are picked up by flies that serve as intermediate hosts.
4. Larvae are released from mouthparts of flies as they feed around wounds or moist areas of the body.
5. Horse swallows larvae or an infected fly.
Stop cycle by deworming.

OBJECTIVE 7

Optional Activities/
Resources in
Instructor's Guide

Select from a list families of drugs effective against internal and external parasites.

- Benzimidazoles
- Organophosphates

  ☑ **NOTE:** Organophosphates are not used commonly and can cause colic and diarrhea.

- Phenothiazine-piperazines

  ☑ **NOTE:** Phenothiazine-piperazines are not commonly used.

- Carbamates
- Avermectins (Ivermectin)

  ☑ **NOTE:** Avermectins are the best choice for equines.

OBJECTIVE 8

Optional Activities/
Resources in
Instructor's Guide

List guidelines for the use of anthelmintics.

- Deworm all animals on premises at same time.
- Deworm and quarantine all new additions to herd.

  ☑ **NOTE:** Delay worming for two weeks if unsure of last worming date.

- Deworm at frequent intervals (8 weeks optimum).

  ☑ **NOTE:** Foals should be wormed every month for first year starting around two months of age.

- Alternate anthelmintics to avoid buildup of resistant worm population.
- Calculate dose by body weight.
- Administer by route most beneficial.
  - ☐ Stomach tube – must be done by a veterinarian
  - ☐ Dose syringe – place substance on back of tongue

- ☐ Feed additives – sprinkle on feed
- ☐ Pastes - place drug on back of the tongue

- Take extra precautions in deworming foals, pregnant mares, heavily parasitized, or very poor animals.
- Deworm broodmares 30 days before foaling.

☑ **NOTE:** Use only approved anthelmintics. Consult your veterinarian.

- Consult a veterinarian concerning fecal examinations and abnormalities.

OBJECTIVE 9 **Describe safety procedures when using insecticides and anthelmintics.**

Optional Activities/ Resources in Instructor's Guide

- Follow label directions carefully.

☑ **NOTE:** Both people and horses are susceptible to insecticides; properly dose horse; avoid direct contact.

- Use only anthelmintics/insecticides approved and recommended for use on horses.
- Avoid contamination of feed and water supplies when administering insecticides.
- Know toxicity signs of insecticide poisoning.
- Store out of way and in a safe place.
- Place baits for external parasites where children and animals cannot get to them.

OBJECTIVE 10 **Complete Assignment Sheet 1.**

OBJECTIVE 11 **List management practices used in the prevention of parasitism.**

Optional Activities/ Resources in Instructor's Guide

- Feed hay and grain in trough and/or manger, not on the ground.
- Supply fresh, clean water.

796

- Clean manure daily from stalls and small paddocks.
- Store manure in a tightly constructed pit for at least a two-week interval prior to spreading.

  ☑ **NOTE:** Spread on crop land and/or pasture not currently being used for horses.

- Mow and rake pastures frequently.
- Rotate pasture, alternately graze cattle and horses, and let the pasture rest three months of the year.
- Treat infected animals prior to turning them out to a clean area.
- Deworm at two-month intervals.
- Treat with effective insecticide during late spring, summer, and early fall.
- Provide good sanitary measures and a high level of nutrition.
- Control the fly population in barns.

OBJECTIVE 12 **Complete Assignment Sheet 2.**

ASSIGNMENT SHEET 1

PARASITES

B3

Name ______________________ Score __________

OBJECTIVE 9

Use proper handling and disposal techniques for insecticides and anthelmintics.

INSTRUCTIONS

Study the labels on the following pages and then answer the questions that follow.

Part 1 - Interpret an Overkill 5.7™ label

Part 2 - Interpret a Rotectin 1™ label

Part 3 - Interpret a Rotectin 2™ label

Reading Comprehension
- Gain factual information

Functional Reading
- Follow written instructions

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition
- Use complete sentences

Life Science
- Investigate health issues

FIGURE 1

FARNAM

OVERKILL 5.7

5.7% PERMETHRIN

LIVESTOCK AND PREMISE SPRAY CONCENTRATE

ACTIVE INGREDIENT:
Permethrin (3-Phenoxyphenyl) methyl (±) cis,trans-3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate* 5.7%
INERT INGREDIENTS 94.3%
100.0%

*Cis/trans ratio: Min. 35% (±) cis and max. 65% (±) trans
Contains 50 grams per liter (1.67 oz active ingredient per quart)

KEEP OUT OF REACH OF CHILDREN
CAUTION
SEE BACK PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS AND STATEMENT OF PRACTICAL TREATMENT

NET CONTENTS 16 OZ (473.2 ml)

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION
AVOID CONTACT WITH SKIN AND EYES
AVOID BREATHING SPRAY MIST
SEE HANG TAG FOR COMPLETE DIRECTIONS FOR USE.

STATEMENT OF PRACTICAL TREATMENT: In case of eye or skin contact, immediately flush eyes with plenty of water or wash skin with soap and water. Get medical attention if discomfort persists.

If Swallowed: Call a physician. Vomiting should be supervised by a physician or the qualified professional medical staff because of the possible pulmonary damage via aspiration of the solvent.

ENVIRONMENTAL HAZARDS: This pesticide is extremely toxic to fish. Use with care when applying to areas adjacent to any body of water. Do not apply directly to water. Do not contaminate water by cleaning of equipment or disposal of wastes. Apply this product only as specified on this label.

PHYSICAL OR CHEMICAL HAZARDS: Do not use or store near heat or open flame.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

Storage: Keep container sealed when not in use. Do not store near food or feed. Protect from freezing.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

In case of spill on floor or paved surfaces, soak up with sand, earth or synthetic absorbent. Remove to chemical wastes area and dispose of in accordance with state and local regulations.

Container Disposal: Triple rinse (or equivalent). Then dispose of in a sanitary landfill or incineration or by other approved state and local procedures.

EPA Est. No. 602-MO-1 EPA Reg No. 65992-4-270

Manufactured For:
Farnam Companies, Inc.
Omaha, NE 68112

983
©1993 Farnam Companies, Inc.
Printed in U.S.A.
Product Code: 014509

0 86621 14509 2

OVERKILL 5.7™ is a trademark of Farnam Companies, Inc. Used with permission of Farnam Companies, Inc.

Part 1

1. What is the product used for?

____

____

2. How should this product be stored?

____

____

3. What is the wording of the precautionary statement?

____

____

____

4. How should the container be disposed of?

____

____

5. What environmental hazards does this product possess?

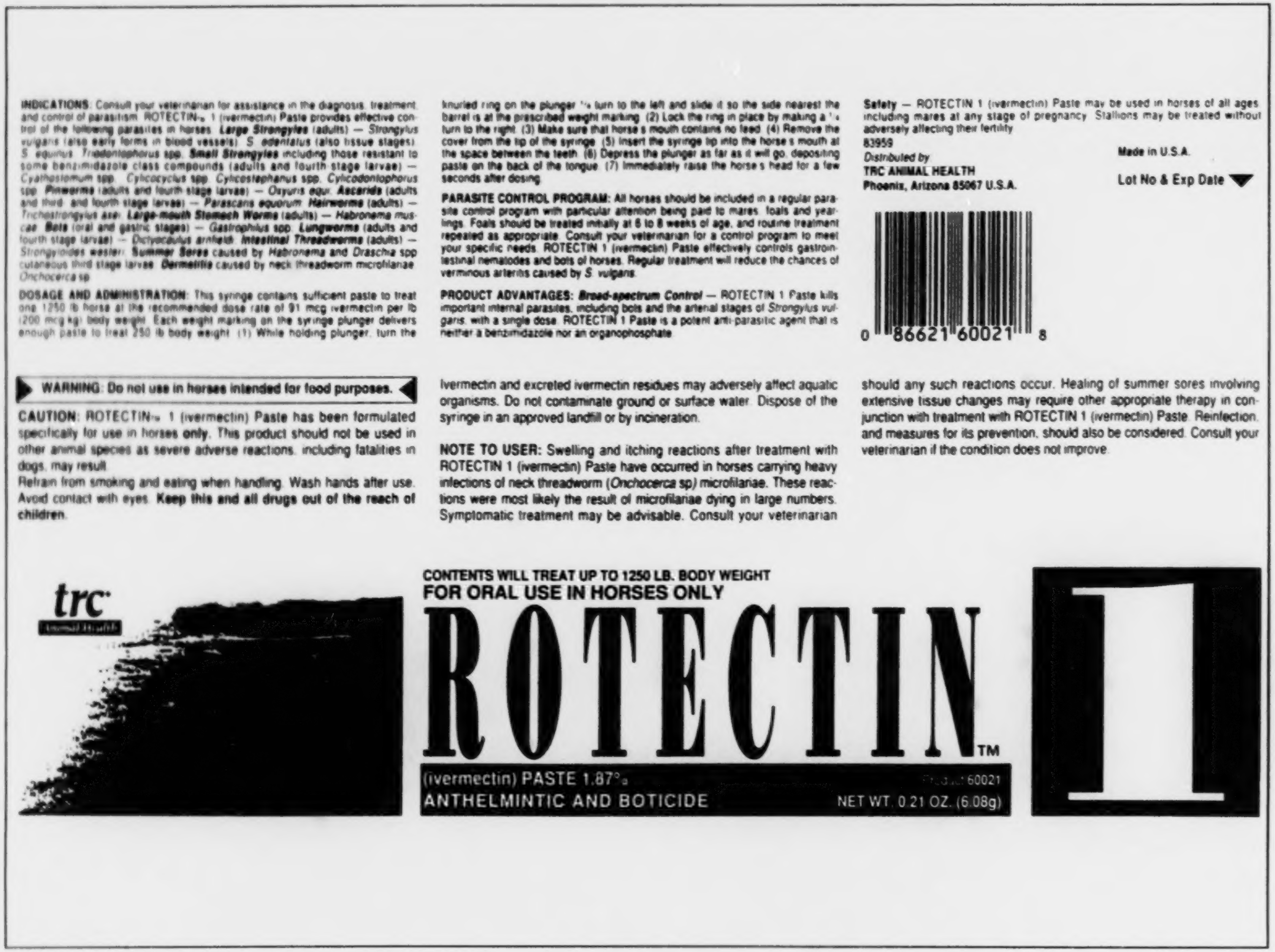
____

____

____

____

FIGURE 2



INDICATIONS: Consult your veterinarian for assistance in the diagnosis, treatment and control of parasitism. ROTECTIN™ 1 (ivermectin) Paste provides effective control of the following parasites in horses. **Large Strongyles** (adults) — *Strongylus vulgaris* (also early forms in blood vessels), *S. edentatus* (also tissue stages), *S. equinus*, *Triodontophorus* spp. **Small Strongyles** including those resistant to some benzimidazole class compounds (adults and fourth-stage larvae) — *Cyathostomum* spp., *Cylicocyclus* spp., *Cylicostephanus* spp., *Cylicodontophorus* spp. **Pinworms** (adults and fourth-stage larvae) — *Oxyuris equi*. **Ascarids** (adults and third- and fourth-stage larvae) — *Parascaris equorum*. **Hairworms** (adults) — *Trichostrongylus axei*. **Large-mouth Stomach Worms** (adults) — *Habronema muscae*. **Bots** (oral and gastric stages) — *Gastrophilus* spp. **Lungworms** (adults and fourth-stage larvae) — *Dictyocaulus arnfieldi*. **Intestinal Threadworms** (adults) — *Strongyloides westeri*. **Summer Sores** caused by *Habronema* and *Draschia* spp. cutaneous third-stage larvae. **Dermatitis** caused by neck threadworm microfilariae, *Onchocerca* sp.

DOSAGE AND ADMINISTRATION: This syringe contains sufficient paste to treat one 1250 lb horse at the recommended dose rate of 91 mcg ivermectin per lb (200 mcg/kg) body weight. Each weight marking on the syringe plunger delivers enough paste to treat 250 lb body weight. (1) While holding plunger, turn the knurled ring on the plunger ¼ turn to the left and slide it so the side nearest the barrel is at the prescribed weight marking. (2) Lock the ring in place by making a ¼ turn to the right. (3) Make sure that horse's mouth contains no feed. (4) Remove the cover from the tip of the syringe. (5) Insert the syringe tip into the horse's mouth at the space between the teeth. (6) Depress the plunger as far as it will go, depositing paste on the back of the tongue. (7) Immediately raise the horse's head for a few seconds after dosing.

PARASITE CONTROL PROGRAM: All horses should be included in a regular parasite control program with particular attention being paid to mares, foals and yearlings. Foals should be treated initially at 6 to 8 weeks of age, and routine treatment repeated as appropriate. Consult your veterinarian for a control program to meet your specific needs. ROTECTIN 1 (ivermectin) Paste effectively controls gastrointestinal nematodes and bots of horses. Regular treatment will reduce the chances of verminous arteritis caused by *S. vulgaris*.

PRODUCT ADVANTAGES: ***Broad-spectrum Control*** — ROTECTIN 1 Paste kills important internal parasites, including bots and the arterial stages of *Strongylus vulgaris*, with a single dose. ROTECTIN 1 Paste is a potent anti-parasitic agent that is neither a benzimidazole nor an organophosphate.

Safety — ROTECTIN 1 (ivermectin) Paste may be used in horses of all ages including mares at any stage of pregnancy. Stallions may be treated without adversely affecting their fertility.

83959

Distributed by
TRC ANIMAL HEALTH
Phoenix, Arizona 85067 U.S.A.

Made in U.S.A.

Lot No & Exp Date ▼

0 86621 60021 8

▶ WARNING: Do not use in horses intended for food purposes. ◀

CAUTION: ROTECTIN™ 1 (ivermectin) Paste has been formulated specifically for use in horses **only**. This product should not be used in other animal species as severe adverse reactions, including fatalities in dogs, may result.
Refrain from smoking and eating when handling. Wash hands after use. Avoid contact with eyes. **Keep this and all drugs out of the reach of children.**

Ivermectin and excreted ivermectin residues may adversely affect aquatic organisms. Do not contaminate ground or surface water. Dispose of the syringe in an approved landfill or by incineration.

NOTE TO USER: Swelling and itching reactions after treatment with ROTECTIN 1 (ivermectin) Paste have occurred in horses carrying heavy infections of neck threadworm (*Onchocerca sp*) microfilariae. These reactions were most likely the result of microfilariae dying in large numbers. Symptomatic treatment may be advisable. Consult your veterinarian should any such reactions occur. Healing of summer sores involving extensive tissue changes may require other appropriate therapy in conjunction with treatment with ROTECTIN 1 (ivermectin) Paste. Reinfection, and measures for its prevention, should also be considered. Consult your veterinarian if the condition does not improve.

trc®
Animal Health

CONTENTS WILL TREAT UP TO 1250 LB. BODY WEIGHT
FOR ORAL USE IN HORSES ONLY

ROTECTIN™ 1

(ivermectin) PASTE 1.87%
ANTHELMINTIC AND BOTICIDE

Product 60021
NET WT. 0.21 OZ. (6.08g)

ROTECTIN™ trademark used with permission of trc® Animal Health.

STUDENT WORKBOOK - Equine Management and Production
ASSIGNMENT SHEET 1 - **CIMC** - B3 - 24

BEST COPY AVAILABLE

Part 2

1. What is the ingredient and form of this product?

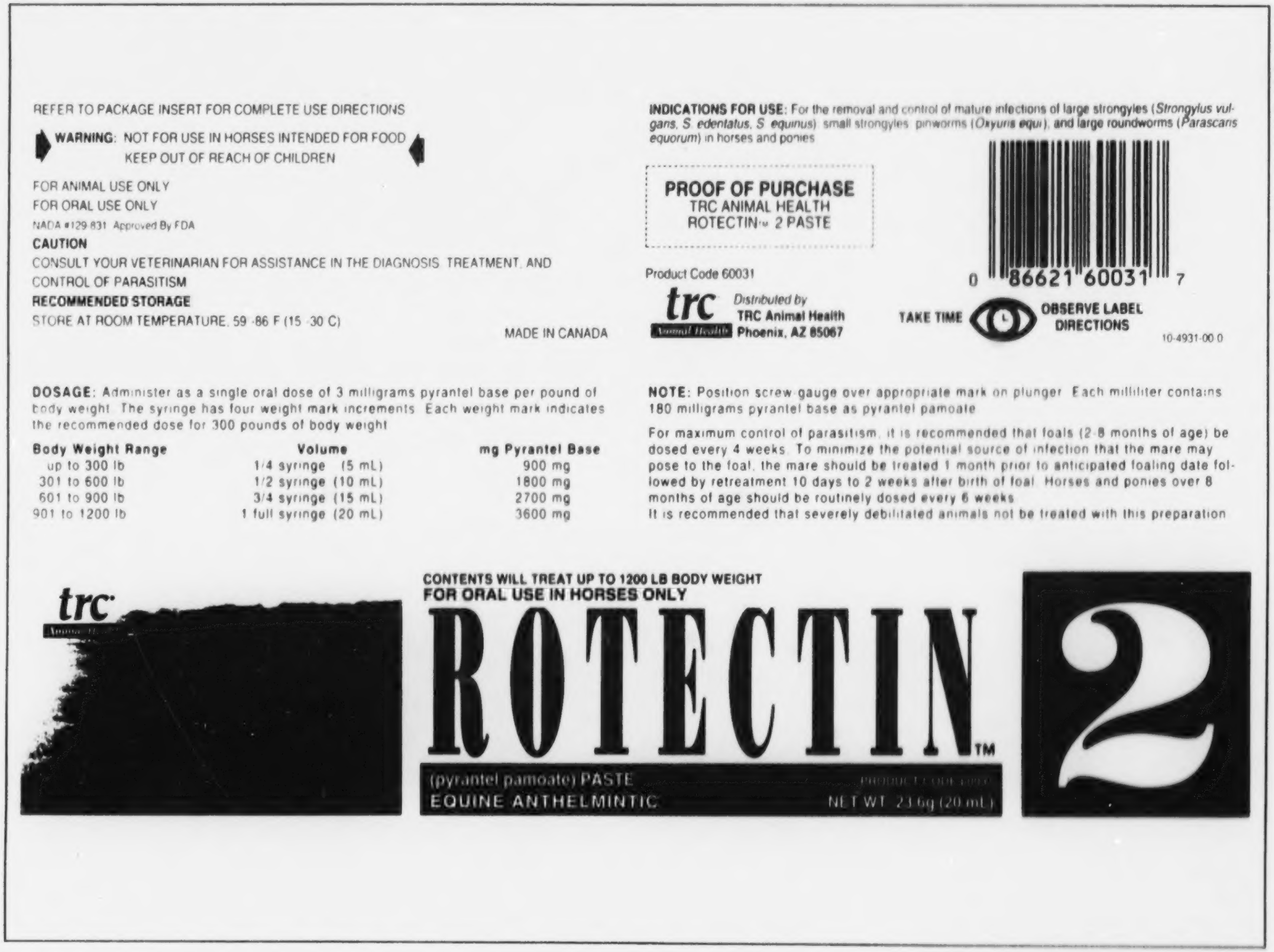
2. What parasites does this product control?

3. What classes of horses can this product be used on?

4. What cautions should be taken with this product?

5. What is the recommended dose rate?

FIGURE 3



REFER TO PACKAGE INSERT FOR COMPLETE USE DIRECTIONS

WARNING: NOT FOR USE IN HORSES INTENDED FOR FOOD
KEEP OUT OF REACH OF CHILDREN

FOR ANIMAL USE ONLY
FOR ORAL USE ONLY
NADA #129-831 Approved By FDA

CAUTION
CONSULT YOUR VETERINARIAN FOR ASSISTANCE IN THE DIAGNOSIS TREATMENT, AND CONTROL OF PARASITISM

RECOMMENDED STORAGE
STORE AT ROOM TEMPERATURE, 59 -86 F (15 -30 C)

MADE IN CANADA

INDICATIONS FOR USE: For the removal and control of mature infections of large strongyles (*Strongylus vulgans, S edentatus, S equinus*) small strongyles pinworms (*Oxyuris equi*), and large roundworms (*Parascaris equorum*) in horses and ponies

PROOF OF PURCHASE
TRC ANIMAL HEALTH
ROTECTIN™ 2 PASTE

0 86621 60031 7

Product Code 60031

trc
Animal Health
Distributed by
TRC Animal Health
Phoenix, AZ 85067

TAKE TIME **OBSERVE LABEL DIRECTIONS**

10-4931-00 0

DOSAGE: Administer as a single oral dose of 3 milligrams pyrantel base per pound of body weight The syringe has four weight mark increments Each weight mark indicates the recommended dose for 300 pounds of body weight

Body Weight Range	Volume	mg Pyrantel Base
up to 300 lb	1/4 syringe (5 mL)	900 mg
301 to 600 lb	1/2 syringe (10 mL)	1800 mg
601 to 900 lb	3/4 syringe (15 mL)	2700 mg
901 to 1200 lb	1 full syringe (20 mL)	3600 mg

NOTE: Position screw gauge over appropriate mark on plunger Each milliliter contains 180 milligrams pyrantel base as pyrantel pamoate

For maximum control of parasitism, it is recommended that foals (2-8 months of age) be dosed every 4 weeks. To minimize the potential source of infection that the mare may pose to the foal, the mare should be treated 1 month prior to anticipated foaling date followed by retreatment 10 days to 2 weeks after birth of foal Horses and ponies over 8 months of age should be routinely dosed every 6 weeks
It is recommended that severely debilitated animals not be treated with this preparation

CONTENTS WILL TREAT UP TO 1200 LB BODY WEIGHT
FOR ORAL USE IN HORSES ONLY

trc
Animal Health

ROTECTIN™ 2

(pyrantel pamoate) PASTE
PRODUCT CODE 60031
EQUINE ANTHELMINTIC
NET WT 23.6g (20 mL)

ROTECTIN™ trademark used with permission of trc® Animal Health.

BEST COPY AVAILABLE

Part 3

1. What is the ingredient and form of this product?

____

____

2. What are the indications for use?

____

____

____

3. What body weight of horse will this product treat?

____

4. What is the recommended storage of this product?

____

5. What is the recommended treatment for foals 2-8 months of age?

____

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ASSIGNMENT SHEET 2

PARASITES

B3

Name ______________________________ Score __________

OBJECTIVE 11

Analyze case studies for factors that affect susceptibility of horses to parasites.

INSTRUCTIONS

Read the following case studies and write a short discussion of the factors that affect susceptibility to parasites. Include a brief explanation of how the susceptibility may be lessened.

Reading Comprehension
- Gain factual information
- Analyze cause and effect
- Draw conclusions

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition
- Use complete sentences

Life Science
- Investigate health issues

1. An owner has two geldings that are dewormed in the spring and fall.

2. A mare is kept in a stall. The owner cleans the stall twice a week.

3. An owner has several horses and throws square bales on the ground to feed them.

4. Several horses are kept in the same pasture all year.

5. Manure is spread directly from the stall.

OBJECTIVE SHEET

FUNDAMENTALS OF FOOT CARE

B4

INTRODUCTION

Proper foot care is an essential part of caring for horses. Without proper foot care horses can develop foot and leg problems that will affect their ability to perform. Horse owners and caretakers should know basic anatomy and foot care and have the ability to check horses' feet.

PREREQUISITES

Equine Management and Production, Unit A2 "Safety."

FOCUS ASSIGNMENTS

Reading Comprehension

- Gain factual information
- Analyze cause and effect
- Draw conclusions

Language

- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition

- Use complete sentences

FOCUS ASSIGNMENTS

PREREADING:	Read the Handout *No Feet, No Horse*. As you read, pay special attention to the importance of healthy feet for the horse.
WRITING:	Write a short (one paragraph) discussion on the importance of healthy feet for the horse.

UNIT OBJECTIVE

After completing this unit, you will show the following competencies by mastering the activities on the Job Sheet and by scoring at least 85% on the Written Test.

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SPECIFIC OBJECTIVES

1. Match external parts of the foot and lower leg to their definitions.
2. Label internal parts of the foot and lower leg.
3. Match parts of the foot and lower leg to their specific relationships and/or functions.
4. Select from a list the critical factors in the care of a foot.
5. List means of maintaining sufficient moisture in the hoof.
6. Select from a list the most common causes of lameness.
7. Lift, clean, and check a horse's foot. (Job Sheet)

INFORMATION SHEET

FUNDAMENTALS OF FOOT CARE

B4

OBJECTIVE 1

Match external parts of the foot and lower leg to their definitions.

Required Activities/ Resources
- Transparency Masters 1 and 2

Optional Activities/ Resources in Instructor's Guide

WORDS YOU SHOULD KNOW	
foot	area below the pastern and through the hoof
hoof	strong, balanced, horny covering of the foot from the coronary band to the ground

SIDE VIEW (Figure 1)

- **cannon** – area between the knee and the fetlock
- **fetlock** – area that connects the pastern and the cannon
- **pastern** – area between the hoof and the fetlock
- **perioplic ring** – narrow strand of flesh which lies just above the coronary band

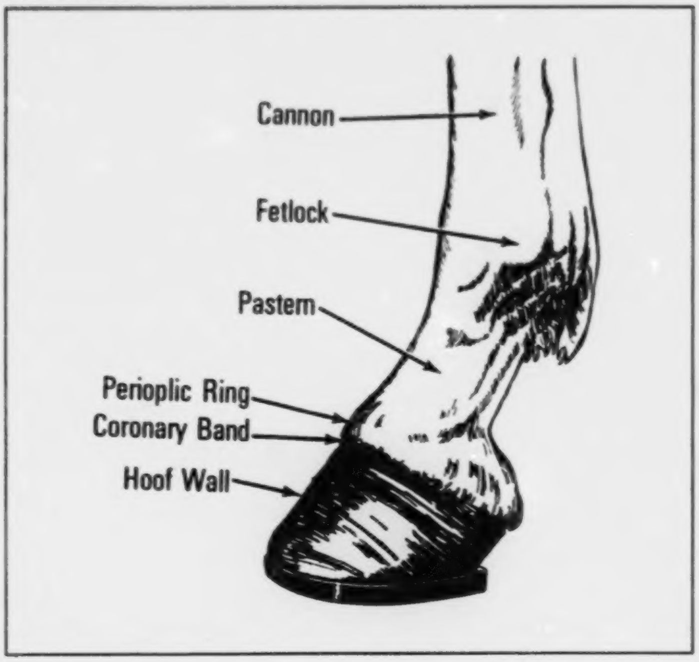
  ☑ **NOTE:** The perioplic ring produces a varnish-like substance that covers the hoof wall and prevents moisture from escaping the hoof.

- **coronary band (coronet)** – thick section of tough flesh at the top of the hoof where the skin and hide join with the hoof wall

  ☑ **NOTE:** The hoof wall is produced in the coronary band.

- **hoof wall** – tough, horny outer shell which protects the sensitive area and supports weight

FIGURE 1



BOTTOM VIEW (Figure 2 and Figure 3)

- **heel** – rear portion of the foot that makes contact with the ground first when the horse is in motion
- **quarter** – thinnest portion of the wall halfway around the side of the hoof
- **toe** – front of the hoof; leaves the ground last as the horse is in motion
- **bulbs** – rounded edges at the rear of the hoof that are located at the termination point of the coronary band
- **frog** – wedge-shaped soft horn structure in the center of the underside of the foot

  ☑ **NOTE:** The frog aids in circulation of the hoof and traction and absorbs moisture into the foot.

- **commissures** – deep groves on both sides of the frog

- **bars** – continuation of the bearing edge of the wall; located on either side of the commissures

- **sole** – undersurface of the hoof located just inside the wall beyond the separation of the white line

- **white line** – the area of the hoof where the sensitive and insensitive laminae mesh together

FIGURE 2

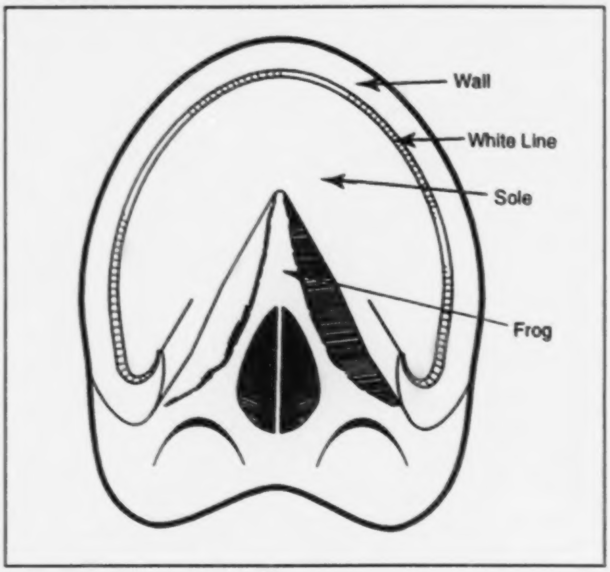
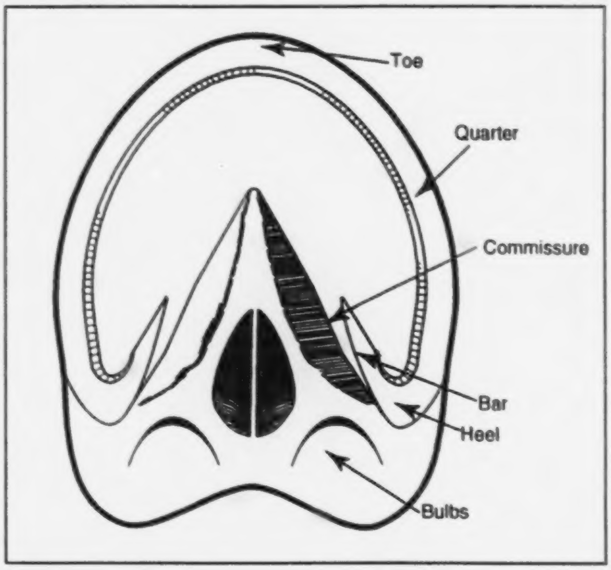

Wall
White Line
Sole
Frog

FIGURE 3


Toe
Quarter
Commissure
Bar
Heel
Bulbs

OBJECTIVE 2

Label internal parts of the foot and lower leg.

You will see one transparency showing the internal parts of the foot and lower leg.

Required Activities/ Resources
- Transparency Master 3

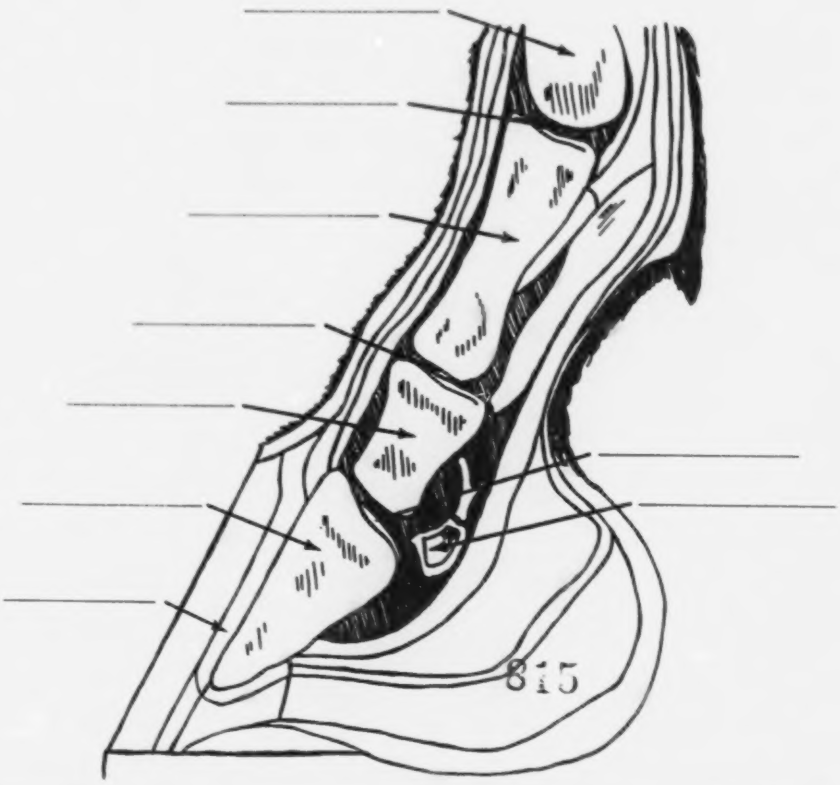
Optional Activities/ Resources in Instructor's Guide

WORDS YOU SHOULD KNOW	
first phalanx	term for the long pastern
second phalanx	term for the short pastern
third phalanx	term for the coffin bone

As you view the transparency, list these parts in the spaces below.

Cannon Bone
Fetlock Joint
Long Pastern
Pastern Joint
Short Pastern
Coffin Bone
Laminae
Coffin Joint
Navicular Bone

FIGURE 4



OBJECTIVE 3

Optional Activities/ Resources in Instructor's Guide

Match parts of the foot and lower leg to their specific relationships and/or functions.

- **coffin bone (third phalanx)** – largest bone in the foot; is porous with many perforations for arteries, veins, and nerves to pass through and nourish the structures below
- **short pastern bone (second phalanx)** – half of the bone is in the foot and the other half is above the foot
- **navicular bone** – positioned at the back of the coffin joint; serves as a pulley for the deep digital flexor tendon
- **corium** – modified vascular tissue that furnishes nutrition to the hoof

  ☑ **NOTE:** The corium, or inner sensitive laminae of the hoof, produces the insensitive laminae which intermesh and attach to it.

- **digital cushion** – absorbs concussion or jar when the foot strikes the ground

  ☑ **NOTE:** The digital cushion is a wedge-shaped fibroelastic structure surrounded by the lateral cartilages at the sides, the deep digital flexor tendon above and the horny frog below.

- **coronary band** – main area of growth and nutrition for the hoof; located at the hair line immediately above the hoof

  ☑ **NOTE:** Injuries to the coronary band are very serious.

- **hoof wall** – outer covering that encloses and protects the sensitive parts
- **perioplic ring** – produces periople, the varnish-like substance that covers the outer surface of the wall and seals it from excessive drying
- **white line** – layer of soft horn which appears at the bottom of the foot between the wall and sole
- **frog** – cushions internal parts and aids in traction and blood circulation

- **commissures** – give elasticity
- **sole** – flaky horn which covers the bottom of the hoof and is concave at the ground surface

  ☑ **NOTE:** If the sole makes contact with the ground lameness can occur from sole bruising.

- **bars** – help support the foot and keep it open at the heels

OBJECTIVE 4

Optional Activities/ Resources in Instructor's Guide

Select from a list the critical factors in the care of a foot.

- Trimming
- Shoeing
- Cleaning the hoof
- Correct moisture content
- Hoof wear

  ☑ **NOTE:** Check for abnormal hoof wear.

- Daily inspection
- Conformation

OBJECTIVE 5

Optional Activities/ Resources in Instructor's Guide

List means of maintaining sufficient moisture in the hoof.

- Soaking
- Applying hoof dressing
- Packing with mud

OBJECTIVE 6

Optional Activities/
Resources in
Instructor's Guide

Select from a list the most common causes of lameness.

- Poor hoof care
- Conformation
- Injury
- Improper shoeing
- Foreign object in the hoof
- Disease of the foot
- Lack of moisture in the hoof

JOB SHEET FUNDAMENTALS OF FOOT CARE B4

Name ______________________________

OBJECTIVE 7

Lift, clean, and check a horse's foot.

EQUIPMENT AND SUPPLIES

- Horse (preferably gentle)
- Hoof pick
- Hoof dressing

⚠ **WARNING:** INJURY TO BOTH HORSES AND HUMANS POSSIBLE. Use caution when handling horses' feet.

PROCEDURE

Functional Reading
- Follow written instructions

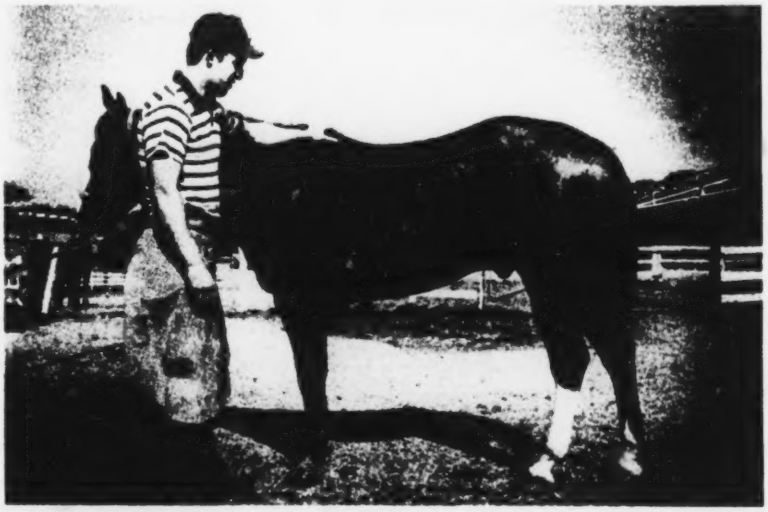
Life Science
- Investigate/apply principles of anatomy/physiology
- Investigate health issues

Job Acquisition/ Development
- Master specific job task/procedure

PROCEDURE FOR LEFT FRONT FOOT

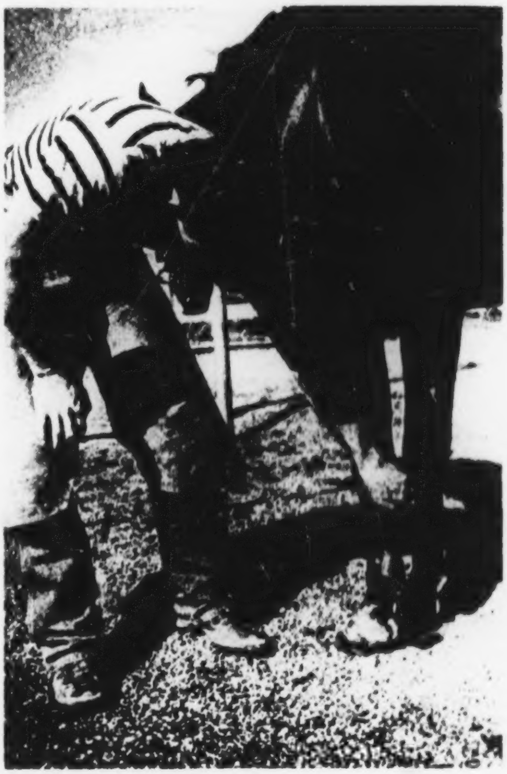
	Yes	No
☑ **NOTE:** Halter and tie horse or have someone hold it. If a person is holding, the person should be on the same side as person lifting foot.		
1. Approach the horse from the near side while facing the rear.	____	____
2. Place your left hand gently on the horse's neck (Figure 1).	____	____

FIGURE 1



	Yes	No
3. Slide your hand slowly down the inside of the horse's left front leg.	____	____
4. Apply slight pressure to the inside cannon slightly below the knee. (Figure 2)	____	____

FIGURE 2



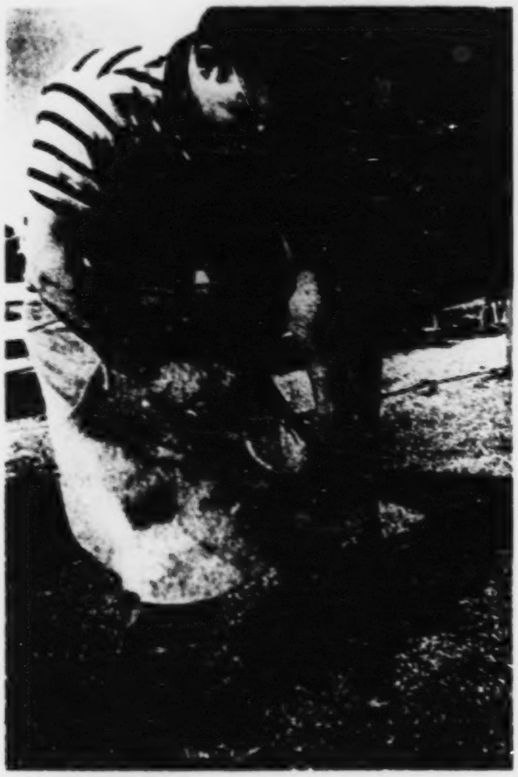
	Yes	No
5. Raise the horse's leg upward and toward the rear as the horse gives you its foot.	____	____

☑ **NOTE:** Do not place strain on the horse's leg.

Yes No

6. Place your left hand under the hoof or straddle the leg, allowing the hoof to rest just above your knees for support. Stand with your toes pointing inward and bent at the knees so the horse is comfortable. (Figure 3) ____ ____

FIGURE 3



7. Stand relaxed and the horse will relax. ____ ____

8. Clean the foot with the hoof pick by using a heel-to-toe motion, especially in the commissures. ____ ____

☑ **NOTE:** Use ample pressure to remove all dirt and foreign material.

		Yes	No
9.	Check the frog for elasticity by applying pressure with the thumb.	____	____
	☑ **NOTE:** If the frog is hard and the hoof shows signs of cracking, conditioner is needed.		
10.	Apply hoof conditioner to the sole and frog if needed.	____	____
	☑ **NOTE:** A toothbrush is good to use as an applicator, but conditioner may be applied with the fingers.		
11.	Set the hoof carefully on the ground.	____	____
12.	Apply hoof conditioner around the coronary band if needed.	____	____

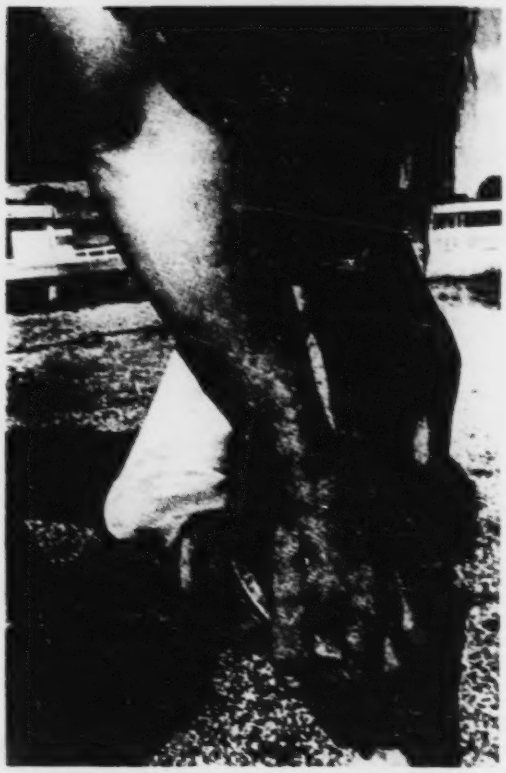
PROCEDURE FOR LEFT REAR FOOT

1.	Approach the horse from the near side.	____	____
2.	Place your hand gently on the horse's hip.	____	____
3.	Grip the horse's leg just below the hock and squeeze gently.	____	____

Yes No

4. Reach out with your left hand and hold the toe after the horse raises its foot. (Figure 4) ____ ____

FIGURE 4



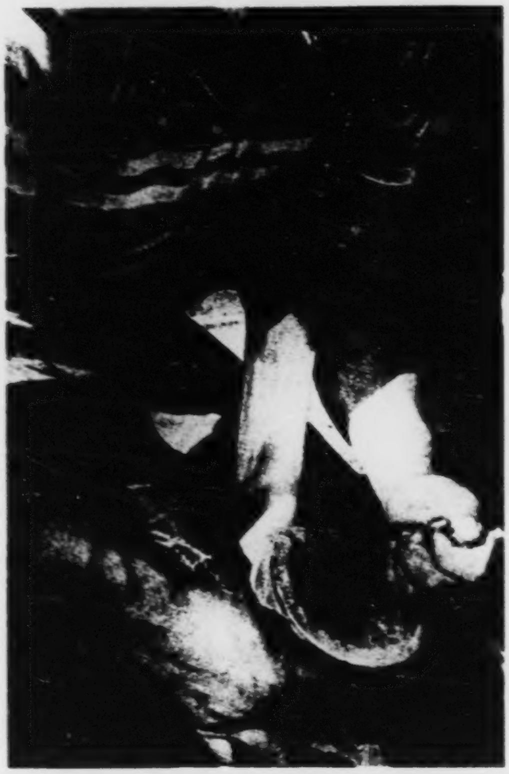
5. Move slowly under the foot when the horse relaxes. ____ ____

☑ **NOTE:** Do not pull foot out to you or try to force the horse to give it to you.

Yes No

6. Place the cannon on your thigh, allowing the foot to rest on your knees. (Figure 5) ____ ____

FIGURE 5



7. Clean the foot with the hoof pick by using a heel-to-toe motion, especially in the commissures. ____ ____

☑ **NOTE:** Use ample pressure to remove all dirt and foreign matter.

8. Check the frog for elasticity by applying pressure with the thumb. ____ ____

9. Apply hoof conditioner to the sole and frog if needed. ____ ____

10. Set the hoof carefully on the ground. ____ ____

11. Apply hoof conditioner around the coronary band if needed. ____ ____

PROCEDURE FOR RIGHT REAR FOOT	Yes	No
1. Approach horse from the off side.	____	____
2. Place your right hand gently on the horse's hip.	____	____
3. Grip the horse's leg just below the hock with your left hand and squeeze gently.	____	____
4. Reach with your right hand and hold the toe after the horse raises its foot.	____	____
5. Move under the foot when the horse relaxes.	____	____
6. Place the cannon on your right thigh.	____	____
7. Clean the foot with the hoof pick by using a heel-to-toe motion, especially in the commissures.	____	____
☑ **NOTE:** Use ample pressure to remove all dirt and foreign material.		
8. Check the frog for elasticity by applying pressure with the thumb.	____	____
9. Apply hoof conditioner to the sole and frog if needed.	____	____
10. Set the hoof carefully on the ground.	____	____
11. Apply hoof conditioner around the coronary band if needed.	____	____
PROCEDURE FOR RIGHT FRONT FOOT		
1. Approach the horse from the off side while facing the rear.	____	____
2. Place your right hand gently on the horse's neck.	____	____
3. Slide your hand slowly down the inside of the horse's right front leg.	____	____

	Yes	No
4. Apply slight pressure inside the cannon immediately below the knee.	____	____
5. Raise the foot upward and towards the rear.	____	____
6. Place your right hand under the hoof or straddle the hoof, allowing it to rest just above your knees.	____	____
7. Clean the foot with the hoof pick by using a heel-to-toe motion, especially in the commissures.	____	____
☑ **NOTE:** Use ample pressure to remove all dirt and foreign material.		
8. Check the frog for elasticity by applying pressure with the thumb.	____	____
9. Apply hoof conditioner to the sole and frog if needed.	____	____
10. Set the hoof carefully on the ground.	____	____
11. Apply hoof conditioner around the coronary band if needed.	____	____

SKILL TEST RECORD

EVALUATOR'S COMMENTS

____

____

____

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Key below.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:

Safety followed	4	3	2	1
Front feet lifted correctly	4	3	2	1
Rear feet lifted correctly	4	3	2	1
Feet cleaned	4	3	2	1
Feet checked	4	3	2	1

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AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the points in Product Evaluation and divide by the total number of criteria. Circle the rating on the Key.

KEY

4 **Skilled** – Can perform job with no additional training.
3 **Moderately Skilled** – Has performed job during training program; limited additional training may be required.
2 **Limited Skill** – Has performed job during training program; additional training is required to develop skill.
1 **Unskilled** – Is familiar with process, but is unable to perform job.

EVALUATOR'S COMMENTS

____

____

____

OBJECTIVE SHEET

COMMON LEG AND FOOT PROBLEMS, TRIMMING AND SHOEING

B5

INTRODUCTION

Horses legs and feet, especially those of performance horses, undergo a great deal of stress. Horses are susceptible to many leg and foot injuries, such as forms of tendonitis or bursitis. Many leg and foot problems can be prevented and remedied by proper leg and foot care. Part of proper foot care involves trimming and shoeing a horse's feet. Horse owners and caretakers should know how to trim a horse's feet and be knowledgeable about proper shoeing practices.

PREREQUISITES

Equine Management and Production, Unit A2 "Safety."

FOCUS ASSIGNMENTS

Reading Comprehension
- Gain factual information
- Analyze cause and effect
- Draw conclusions

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition
- Use complete sentences

FOCUS ASSIGNMENTS	
PREREADING:	Read the OSU Extension Facts No. F-9115 *Laminitis in Horses*. As you read pay special attention to the problems that laminitis can cause.
WRITING:	Write a short (one paragraph) discussion on how laminitis might seriously affect a horse.

UNIT OBJECTIVE

After completing this unit, you will show the following competencies by mastering the activities on the Assignment and Job Sheets and by scoring at least 85% on the Written Test.

SPECIFIC OBJECTIVES

1. List general situations relating to unsoundness.
2. Match major diseases and injuries causing unsoundness to their definitions.
3. Match major diseases and injuries of the foot to their definitions.
4. List common unsoundnesses that result in retiring horses.
5. Describe diagnostic procedures for detecting lameness.
6. Select from a list causes of lameness in which symptoms decrease with use.
7. Match the suspected areas of lameness to the correct indications.
8. Analyze case studies to determine the possible indications and locations of lameness. (Assignment Sheet)
9. Label basic farrier tools.
10. Select from a list considerations when preparing the hoof for trimming and/or shoeing.
11. List common faults in preparation of the hoof.
12. Complete a chart on conformation defects of forelegs.
13. Complete a chart on conformation defects of hind legs.
14. Select from a list guidelines for effective shoeing.
15. Remove a shoe. (Job Sheet 1)
16. Trim a foot. (Job Sheet 2)

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COMMON LEG AND FOOT PROBLEMS, TRIMMING AND SHOEING

OBJECTIVE 1

Optional Activities/ Resources in Instructor's Guide

List general situations relating to unsoundness.

WORDS YOU SHOULD KNOW	
blemish	minor conformation fault, either occurring congenitally or caused by an injury, that is considered undesirable, but does not interfere with the horse's soundness or serviceability
unsoundness	more serious abnormality that affects the serviceability of the horse

- Poor conformation
- Improper foot care
- Nutritional deficiencies
- Disease
- Accident and injury
- Improper shoeing

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OBJECTIVE 2

Required Activities/
Resources
- Transparency Master 1

Optional Activities/
Resources in
Instructor's Guide

Match major diseases and injuries causing unsoundness to their definitions.

☑ **NOTE:** Consult with a veterinarian regarding treatment for diseases and injuries.

WORDS YOU SHOULD KNOW

arthritis	describes various joint ailments characterized by inflammation, degeneration and new bone formation in and around the joints
bursa	slippery double layers of tissues between moving parts composed of sacs; these sacs allow parts to move freely without friction or wear
bursitis	condition in which the bursa becomes inflamed and swollen; repeated chronic injuries are a major cause
ossified	to change or develop into bone
periostitis	inflammation of the periosteum, a thick layer of connective tissue covering the bones
tendon	tough, inelastic band of fibers connecting muscle to bone; divided into extensors and flexors
tendonitis	expression of a severe sprain or physical stress
tenosynovitis	inflammation and swelling of the synovial sheath; the synovial sheath lubricates and surrounds a tendon

TENDON INJURIES

☑ **NOTE:** The majority of tendon injuries affect the tendons that run down the lower half of the horse's leg and that move the foot.

- **sprains (strain)** – caused by over stretching resulting in a slight tear

  ☑ **NOTE:** Sprains can result from quick twisting injuries to the limb or from overstress of the limb. Mild sprains are sprains in which swelling is not present and minimal damage has occurred to the tendon. Sprains are also referred to as pulled tendons.

- **bowed tendons (flexor tendonitis)** – condition in which the deep flexor tendons and the superficial flexor tendons become bowed, either separately or at the same time

  ☑ **NOTE:** High performance horses are especially susceptible to bowed tendons because of the stress placed on the digital flexor tendons. Signs of tendonitis include swelling, warmth to the area, pain, and lameness.

- **thoroughpin** – type of tenosynovitis involving the deep digital flexor tendon of the hindlimb

  ☑ **NOTE:** Appears as a soft, puffy swelling in the hollows of the hock.

- **bog spavin** – type of tenosynovitis involving swelling of the joint capsule of the hock joint

  ☑ **NOTE:** Bog spavin occurs primarily in younger horses and will generally disappear as the horse matures.

- **stringhalt** – a condition which results in a sudden upward jerking of the hind leg and an involuntary flexing reaction of the hock as the horse moves forward

- **lacerated or ruptured tendons** – caused by deep cuts through the skin and underlying tissue or sudden overextension

BURSITIS

- **capped elbow** – a soft boggy swelling of the bursa overlying the point of the elbow

- **capped hock** – soft, flabby swelling caused by an irritation at the point of the hock

- **capped knee** – swelling over the front of the knee

- **navicular bone disease** – inflammation of the bursa near the small navicular bone

  ☑ **NOTE:** Navicular bone disease is a common cause of front leg lameness. Navicular bone disease is not actually a disease but is a conformation defect.

JOINT INJURIES

☑ **NOTE:** Joint injuries are caused by stretching or tearing of the joint capsule and/or the supporting ligaments beyond the normal range of the joint. Joint injuries can be divided into mild sprains, moderate sprains, or severe sprains.

- **sprained knee** – sprain of the ligaments that stabilize the knee joint; also referred to as popped knee

- **gonitis (stifle lameness)** – swelling of the stifle joint accompanied by lameness

  ☑ **NOTE:** There are various forms of gonitis such as locked kneecap which is an upward fixation of the patella.

- **curb** – swelling of the ligament at the rear of the leg and below the point of the hock

PERIOSTITIS

- **bucked shins** – inflammation of the bone covering causing a painful swelling on the anterior surface of the cannon bone

- **splints** – tearing or strain of the ligaments which connect the splint bones to the cannon bone

- **sesamoiditis** – inflammation of the paired sesamoid bones and coverings

- **ringbone** – describes periostitis occurring below the fetlock joint

ARTHRITIS

- **bone spavin** – arthritis of the hock joint

- **osselets** – swelling and new bone growth of the fetlock joint

  ☑ **NOTE:** Osselets usually begin as a stress injury to the joint capsule of the fetlock.

BROKEN BONES

- **simple fracture** – bone does not break through to the skin

- **compound fracture** – bone makes contact with the outside; either through an open wound or penetration

☑ **NOTE:** Figure 1 (shown at the end of Objective 3) shows areas of some common leg and foot problems.

OBJECTIVE 3

Required Activities/
Resources
– Transparency Master 1

Optional Activities/
Resources in
Instructor's Guide

Match major diseases and injuries of the foot to their definitions.

☑ **NOTE:** Consult with a veterinarian regarding treatment for diseases and injuries.

- **bruised sole** – foreign objects such as rocks can irritate the sole

  ☑ **NOTE:** The bruises occur in the underlying sensitive laminae.

- **canker** – chronic overgrowth of the horn of the foot

  ☑ **NOTE:** Canker is uncommon.

- **contracted heels** – foot is abnormally narrow, especially at the heels; frog may be narrow and sunken

- **corns** – bruises of the sole laminae at the angle of the wall and bar

  ☑ **NOTE:** Improper foot care is a common cause of corns.

- **gravel** – foot infection caused by a puncture wound or penetrating injury to the white line

  ☑ **NOTE:** Infections generally cannot drain at the injury site and pus will travel up the white line and drain at the coronet.

- **laminitis (founder)** – condition in which the blood flow to the vessels of the horse's feet is disrupted; causes destruction of inner-hoof structures

  ☑ **NOTE:** Laminitis causes separation of the laminae from the hoof wall.

- **quittor** – chronic deep seated, oozing infection of the lateral cartilages of the coffin bone

  ☑ **NOTE:** Discharge of infected material will occur through a sinus tract that opens near the coronet. Quittor is often preceded by injuries to the coronet.

- **sand cracks** – splits or cracks in the hoof wall

  ☑ **NOTE:** Identified as toe, quarter, or heel cracks. Causes include hoof wall not being trimmed and hoof drying out.

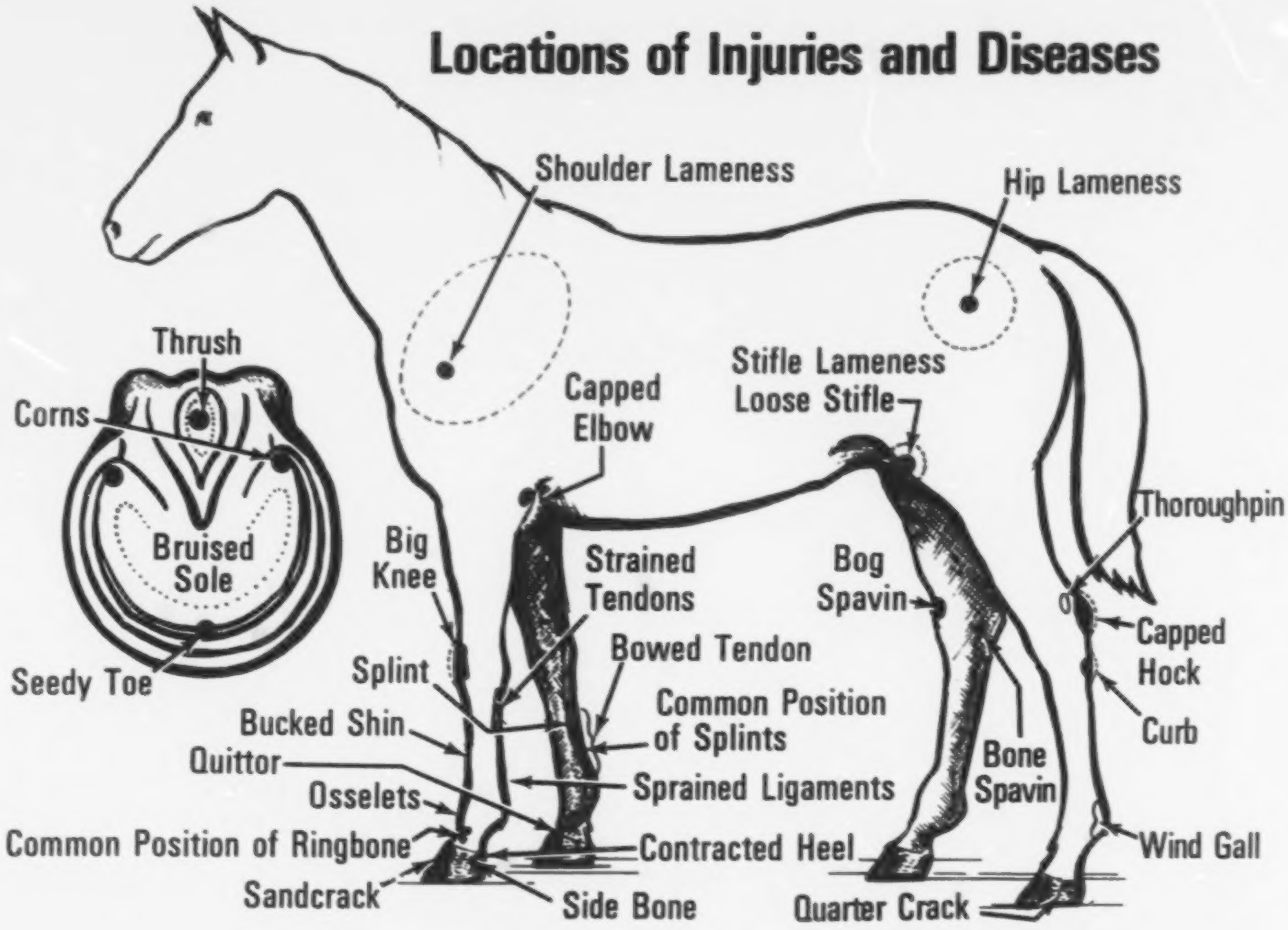
- **sidebones** – ossification of the lateral cartilages

- **thrush** – bacterial infection of the frog resulting from poor or improper sanitation; characterized by odorous black moist accumulation of material

☑ **NOTE:** Figure 1 shows areas of some common foot and leg problems.

FIGURE 1

Locations of Injuries and Diseases


Shoulder Lameness
Hip Lameness
Thrush
Corns
Bruised Sole
Seedy Toe
Capped Elbow
Stifle Lameness
Loose Stifle
Thoroughpin
Big Knee
Strained Tendons
Bog Spavin
Capped Hock
Bowed Tendon
Splint
Common Position of Splints
Curb
Bucked Shin
Quittor
Sprained Ligaments
Bone Spavin
Osselets
Wind Gall
Common Position of Ringbone
Contracted Heel
Sandcrack
Side Bone
Quarter Crack

OBJECTIVE 4

Optional Activities/
Resources in
Instructor's Guide

List common unsoundnesses that result in retiring horses.

- Bowed tendon
- Knee injury
- Osselets
- Bucked shin
- Splint
- Fractured sesamoid
- Fractured fibula
- Quarter crack

OBJECTIVE 5

Optional Activities/
Resources in
Instructor's Guide

Describe diagnostic procedures for detecting lameness.

WORDS YOU SHOULD KNOW	
palpation	act of feeling with the hand

- Visual examination

☑ **NOTE:** This should be done after the horse has been confined to a stall or small area for a period of time.

1. Observe any swellings, enlargements, or defects in conformation.
2. Allow the horse to stand; observe if efforts are made to compensate for pain by shifting weight.
3. Observe characteristics of the gait
    a. Use the trot as the most evident gait if location of lameness is not evident.
    b. Observe from a distance.
    c. Observe from three locations: front, side, and rear.

   d. Listen for sounds of feet striking the ground; an unsound foot strikes the ground with less noise.

   e. Watch for nodding of the head for indication of lameness of the front leg.

   ☑ **NOTE:** Horses will nod their head to lessen the weight on the lame front leg.

- Examination by palpation

☑ **NOTE:** Start at bottom of the foot and make a complete examination of limb.

1. Bottom of foot for injury or contracted heels
2. Hoof wall for excessive dryness, contraction, cracks, and evenness of wear
3. Coronary band for heat
4. Lateral cartilages for calcification
5. Pastern area for temperature and swelling
6. Fetlock joint for areas of pain from pressure, especially over the sesamoid area
7. Cannon bone for splints or bucked shins

- Hoof tester – instrument used to apply pressure to the sole of the foot
- X-rays – radiographs to determine if a fracture is present or hard swellings are bony or fibrous in nature

OBJECTIVE 6

Optional Activities/ Resources in Instructor's Guide

Select from a list causes of lameness in which symptoms decrease with use.

☑ **NOTE:** Even though the symptoms of lameness may lessen, the initial cause is still present and requires treatment.

- Arthritic joint
- Bone spavin

- Ringbone
- Stringhalt
- Navicular
- Strains of muscle structures or tendons
- Sprains of ligaments

OBJECTIVE 7

Match the suspected areas of lameness to the correct indications.

Optional Activities/
Resources in
Instructor's Guide

Indication	Suspect
Lameness on hard ground	Feet
Lameness on soft ground	Shoulder or stifle
Nods or drops head when left front foot makes contact with the ground	Right front foot
Nods or drops head when right front foot makes contact with the ground	Left front foot
Nods or drops head when left hind foot makes contact with the ground; simultaneously raises left hip when left hind foot makes contact with the ground	Left hind foot
Nods or drops head when right hind foot makes contact with the ground; simultaneously raises right hip when right hind foot makes contact with the ground	Right hind foot

☑ **NOTE:** Rear lameness is more difficult to detect.

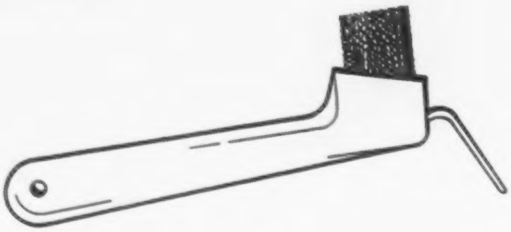
OBJECTIVE 8

Complete the Assignment Sheet.

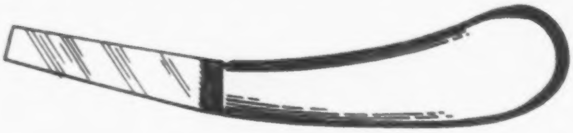
OBJECTIVE 9

Optional Activities/
Resources in
Instructor's Guide

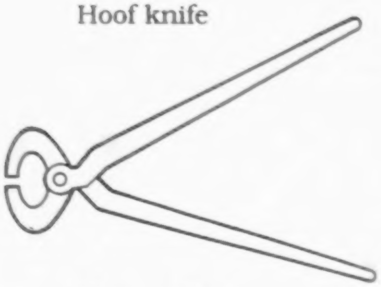
Label basic farrier tools.



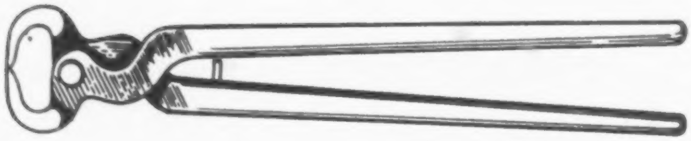
Hoof pick/brush



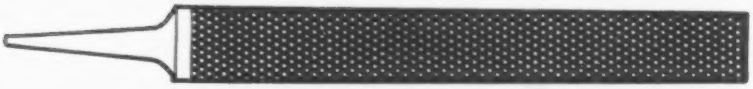
Hoof knife



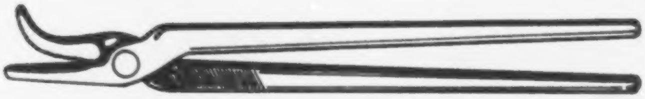
Shoe puller



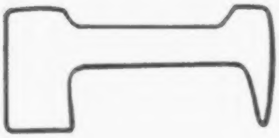
Hoof nipper



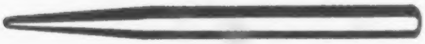
Rasp



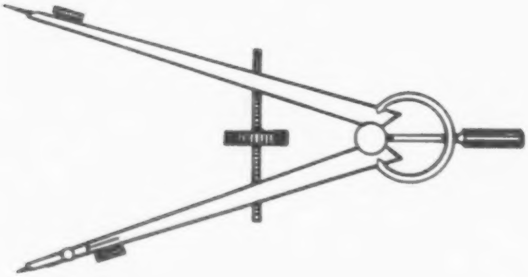
Nail clincher



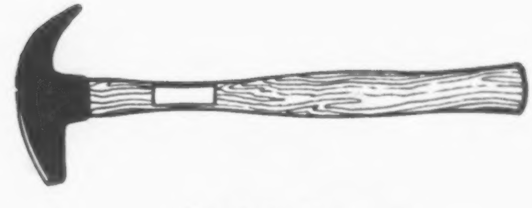
Clinch cutter



Pritchel



Divider



Farrier's Hammer

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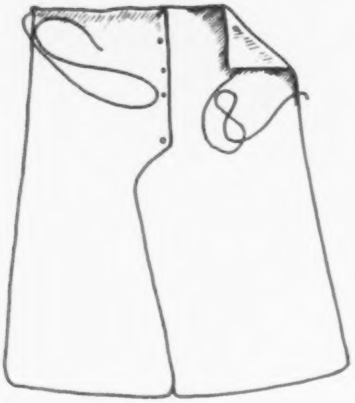
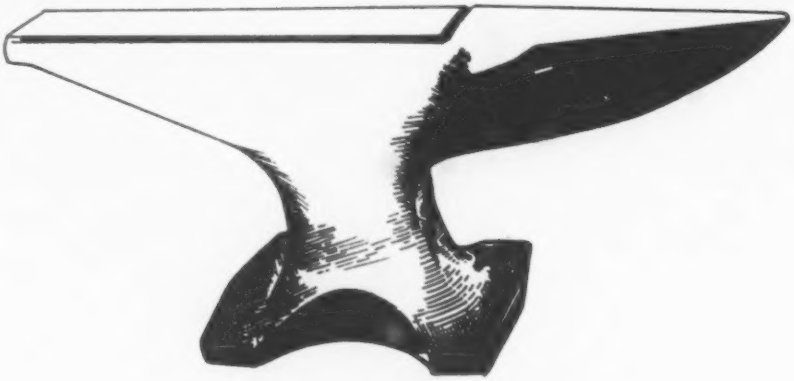
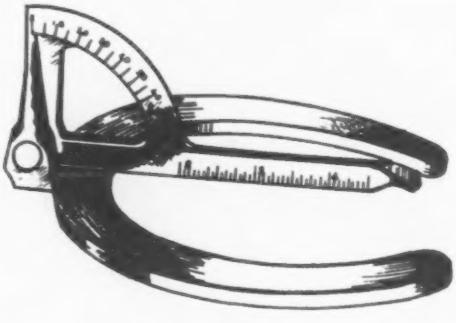


Farrier's Apron



Anvil



Hoof level

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OBJECTIVE 10

Select from a list considerations when preparing the hoof for trimming and/or shoeing.

Required Activities/
Resources
- Video

Optional Activities/
Resources in
Instructor's Guide

☐ Your instructor will show the video *Fancy Footwork.*

☑ **NOTE:** Procedures described in this video may be abbreviated (shortened) for instructional purposes. They should, therefore, never be attempted without qualified professional supervision.

- At rest, examine the wear pattern of the shoe, the shape of the foot, and the hoof angle.
- Move the horse to the shoeing area; shoeing area should have good lighting and a flat surface.
- Remove other animals, such as dogs, from the shoeing area.
- Remove old shoes if shod.
- Using a sole knife trim away old, irregular dead frog, and check for stones, debris and thrush concealed in the overgrown frog.
- Remove old flaking sole to check for damage to the sole area.
- Remove excess hoof wall with nippers.
- Use rasp to make final adjustments.
- Allow the foot to drop freely for analysis.
- Turn rasp on the side, and dress the foot before shoeing.
- Select and shape the appropriate shoe for the particular horse.

  EXAMPLE: Shoes may be made of steel, aluminum, rubber, plastic. Steel is the most commonly used material. There are also shoes for front feet and shoes for hind foot.

- Evaluate the horse after it has been shod.

OBJECTIVE 11

Optional Activities/
Resources in
Instructor's Guide

List common faults in preparation of the hoof.

- Overleveling of the wall

  ☑ **NOTE:** This includes cutting away too much of the hoof irregularities, resulting in sore feet.

- Cutting away the frog
- Scooping the quarters
- Shaping the foot
- Cutting too short

OBJECTIVE 12

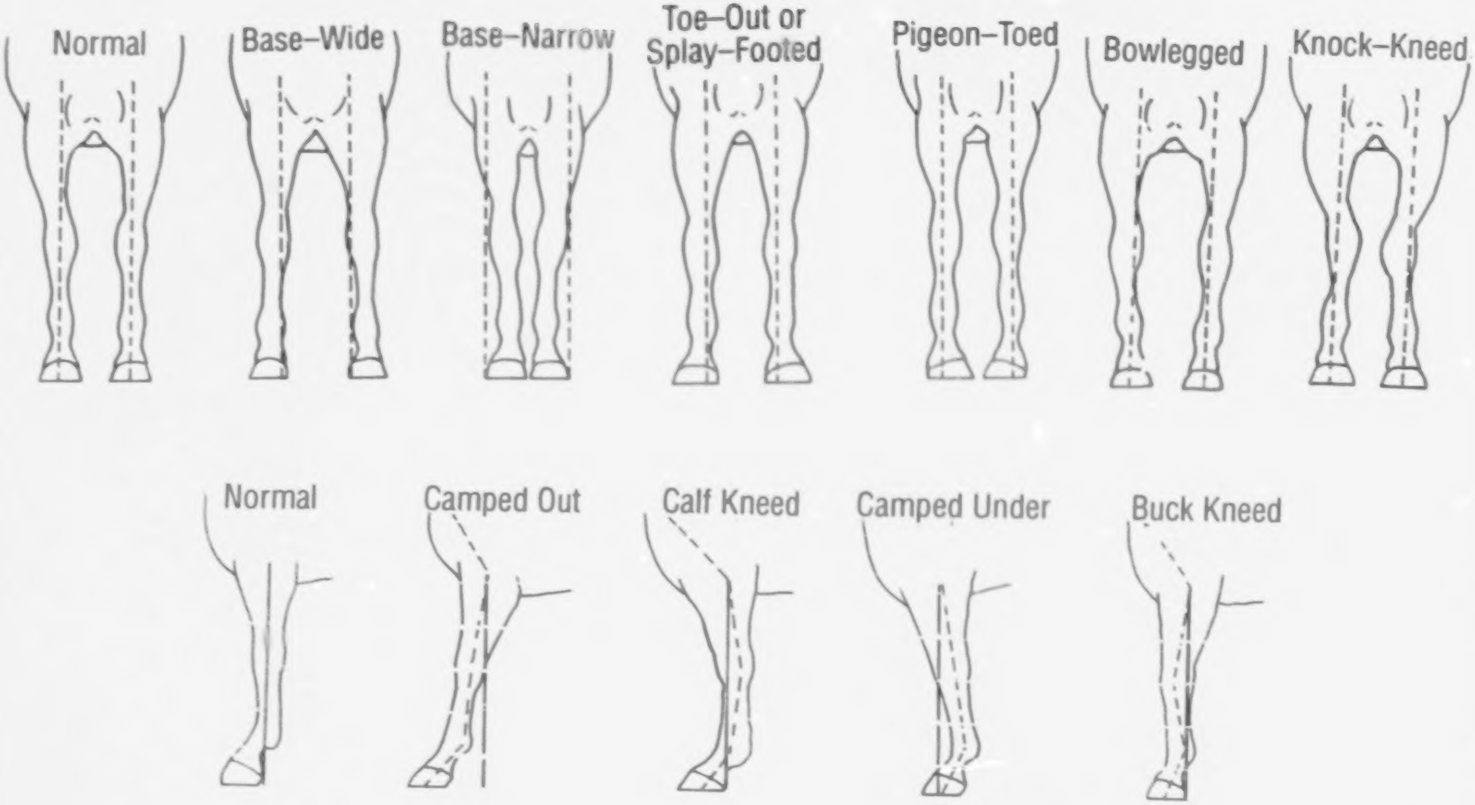
Complete a chart on conformation defects of forelegs.

Required Activities/Resources
- Transparency Master 2

Defect	Cause	Effect on Gait	Area under strain	Remarks	Horseshoer's Correction
Base-wide	Legs	Wings in, may interfere	Inside of fetlock and pastern	Often splay-footed; feet are outside perpendicular line drawn from center of each side of chest; inside of hoof shows wear	Lower outside wall, square toe, and put lateral extensions on inside
Base-narrow	Legs	Paddles	Outside of fetlock and pastern	Often pigeon-toed; feet are inside perpendicular lines drawn from center of each limb at chest; outside of hoof shows wear	Lower inside wall, square toe, and put lateral extension on outside
Pigeon-toed	Whole leg or from fetlock down	Paddles	Outside pastern	Correct trimming of colts will prevent worsening of defect; hoof wears on inside	Lower inside wall, watch for contraction, sidebones, and corns on outside heel; square toe and put lateral extension on outside
Splay-footed	Cannon bone angles forward from knee down	Interference	Inside pastern	Horse seldom remains sound under heavy work	Lower outside wall; watch for contraction, sidebones, and corns on inside heel; square toe and put lateral extension on inside
Calf-knees	Cannon bone angles back from knee down		Whole knee area	Often present at birth but disappears within six months or less	None
Bucked-knees	Congenital or nutritional		Fetlock area	See veterinarian	None
Knock-knees	Congenital or nutritional		Mostly inside knees	See veterinarian	None
Bowlegs			Mostly inside knees		None

FIGURE 2

Conformation Faults of Front Legs


Normal
Base–Wide
Base–Narrow
Toe–Out or Splay–Footed
Pigeon–Toed
Bowlegged
Knock–Kneed
Normal
Camped Out
Calf Kneed
Camped Under
Buck Kneed

OBJECTIVE 13

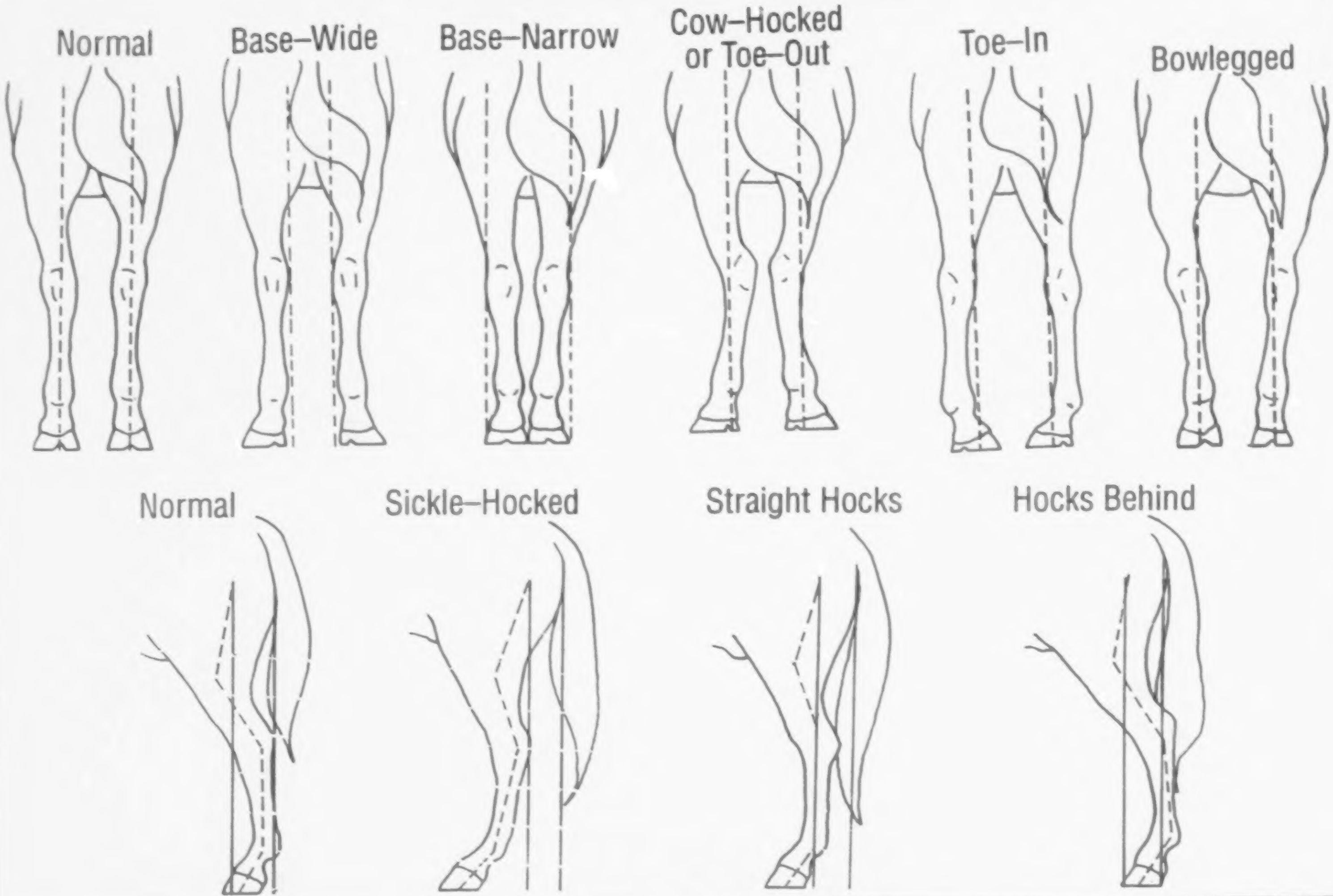
Required Activities/
Resources
- Transparency Master 2

Complete a chart on conformation defects of hind legs.

Defect	Cause	Effect on Gait	Area under strain	Remarks	Horseshoer's Correction
Base-narrow	Legs	Wings out	Outside of bones, ligaments, and joints	Often bowlegged; legs are straight to hock and then bend forward	Lower inside wall; use lateral extension on outside of toe; use trailer on outside branch if feet toe-in
Base-wide	Legs	Wings in, may interfere	Inside of bones, ligaments, and joints	Most common form is cow-hocked	Lower outside wall; use lateral extension on inside, but bevel in underneath so it will not cut horse if horse interferes
Cow-hocked	Legs	Wings in	Inside of hock joint	Strain on hock may cause bone spavin; hind legs have tendency to go wide in a sliding stop	Lower outside wall (prevents worsening of defect in young horses); use lateral extension on inside of toe, swelled heel on inside branch
Sickle-hocked	Legs	Shortens stride	Rear of hock	If defect is very pronounced, horse will not stand up under hard use; hock comes under great stress; makes horse subject to curb	Lower toe as much as possible; heel calk on inside branch may help if splay-footed
Straight (in back)	Legs		Front of hock	Makes horse subject to bog spavin and stifle; easily injured by heavy work; pasterns will be too straight	Lower heels as much as possible

FIGURE 3

Conformation Faults of Hind Legs


Normal
Base–Wide
Base–Narrow
Cow–Hocked or Toe–Out
Toe–In
Bowlegged
Normal
Sickle–Hocked
Straight Hocks
Hocks Behind

OBJECTIVE 14

Optional Activities/
Resources in
Instructor's Guide

Select from a list guidelines for effective shoeing.

- Cut or straighten clinches prior to attempting to remove the old shoe.
- Consider the conformation of the horse when trimming.
- Make sure the foot is level.
- Shape the shoe to the horse's foot, not foot to shoe.
- Set the shoe fully forward to eliminate dubbing of toe.
- Nail shoe to where clinches are evenly distributed at an adequate height.
- Treat the foot for abnormalities if needed.

  EXAMPLE: Hoof dressing for dry feet or treatment for thrush
- Reset at approximately six-week intervals depending on the individual animal.
- Make the experience as pleasing as possible for the horse to avoid trouble in the future.

OBJECTIVE 15

Complete Job Sheet 1.

OBJECTIVE 16

Complete Job Sheet 2.

ASSIGNMENT SHEET

COMMON LEG AND FOOT PROBLEMS, TRIMMING AND SHOEING

B5

Name ______________________________ Score __________

OBJECTIVE 8

Analyze case studies to determine the possible indications and locations of lameness.

INSTRUCTIONS

Read the case studies below and answer the questions that follow in the blanks provided.

Reading Comprehension
- Gain factual information
- Analyze cause and effect
- Draw conclusions

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition
- Use complete sentences

Case 1

While on a trail ride, Misty noticed that Buster, her gelding, was avoiding putting weight on his right front foot. She dismounted and upon checking his foot found a rock lodged in the sole. She removed the rock, but Buster still favored his right front foot. What is one possible explanation for Buster still favoring his right front foot?

____

____

Case 2

Marge is a groom at a local stables. A new horse arrived and Marge was leading the horse to a small pasture. The horse seemed to have difficulty walking and Marge examined the horse. She noticed that the hoof wall was overgrown and dry. What problems might this cause for the horse?

____

____

Case 3

Silver is a young horse that recently started training for the race track. After a strenuous workout, the owner noticed that Silver was dropping his head when his right front foot made contact with the ground. He examines Silver and finds no problems in his hoof or swelling in the leg. What is one explanation of the lameness?

JOB SHEET 1

COMMON LEG AND FOOT PROBLEMS, TRIMMING AND SHOEING

B5

Name ______________________________

OBJECTIVE 15

Remove a shoe.

Your instructor will show the video *Fancy Footwork*. Pay special attention to the procedure for removing a shoe.

WARNING: Procedures described in this video may be abbreviated (or shortened) for instructional purposes. They should, therefore, never be attempted without qualified professional supervision.

EQUIPMENT AND SUPPLIES

- Shod horse
- Shoe puller
- Farrier's hammer
- Hoof pick

WARNING: INJURY TO BOTH HORSES AND HUMANS POSSIBLE. Use caution when trimming feet.

PROCEDURE

Research and Reference
- Use audiovisual media

Job Acquisition/ Development
- Master specific job task/procedure

	Yes	No
1. Pick up the foot; keep the foot as close to its natural position as possible.	____	____
2. Beginning at the heel of the shoe, close the shoe pullers firmly and pull down the wall to release the first nail.	____	____
3. Continue the process working alternately from medial to lateral sides and down toward the toe until the shoe is removed.	____	____

☑ **NOTE:** If this is difficult you may complete step 2 and then drive the shoe back down on the hoof exposing the nails. Nails can then be pulled out one at a time.

SKILL TEST RECORD

EVALUATOR'S COMMENTS

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Key below.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:

Safety followed	4	3	2	1
Shoe removed	4	3	2	1

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the points in Product Evaluation and divide by the total number of criteria. Circle the rating on the Key.

KEY

4 **Skilled** – Can perform job with no additional training.
3 **Moderately Skilled** – Has performed job during training program; limited additional training may be required.
2 **Limited Skill** – Has performed job during training program; additional training is required to develop skill.
1 **Unskilled** – Is familiar with process, but is unable to perform job.

EVALUATOR'S COMMENTS

JOB
SHEET 2

COMMON LEG AND FOOT PROBLEMS, TRIMMING AND SHOEING

B5

Name ____________________________________

OBJECTIVE 16

Trim a foot.

Your instructor will show the video *Fancy Footwork*. Pay special attention to the procedure for trimming.

⚠ **WARNING:** Procedures described in this video may be abbreviated (or shortened) for instructional purposes. They should, therefore, never be attempted without qualified professional supervision.

EQUIPMENT AND SUPPLIES

- Horse with hoofs long enough to trim
- Hoof knife
- Hoof nippers
- Rasp
- Farrier's apron

⚠ **WARNING:** INJURY TO BOTH HORSES AND HUMANS POSSIBLE. Use caution when trimming feet.

PROCEDURE

Research and Reference
- Use audiovisual media

Job Acquisition/Development
- Master specific job task/procedure

	Yes	No
1. Trim away irregular dead frog using a sole knife.	____	____
2. Remove old flaking sole.	____	____
3. Remove excess hoof wall with nippers; hold nippers flat.	____	____
4. Use rasp to make final adjustments; use heel-to-toe action; hold rasp flat and level, avoiding the quarters and the heel.	____	____
5. Sight foot frequently to check for progress.	____	____

SKILL TEST RECORD

EVALUATOR'S COMMENTS

____

____

____

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Key below.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:

Safety followed	4	3	2	1
Correct length trimmed	4	3	2	1
Bottom and sides rasped	4	3	2	1
Hoof falls level	4	3	2	1

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the points in Product Evaluation and divide by the total number of criteria. Circle the rating on the Key.

KEY

4 **Skilled** – Can perform job with no additional training.
3 **Moderately Skilled** – Has performed job during training program; limited additional training may be required.
2 **Limited Skill** – Has performed job during training program; additional training is required to develop skill.
1 **Unskilled** – Is familiar with process, but is unable to perform job.

862

EVALUATOR'S COMMENTS

OBJECTIVE SHEET

PRACTICAL HORSE NUTRITION

C1

INTRODUCTION

Proper horse nutrition is essential in maintaining a horse's health. Not all horses have the same nutritional requirements. It is important to know what the nutritional requirements are for different horses. For example, the nutritional requirements of a lactating mare are different than those of a horse requiring maintenance. Improper feeding management can lead to health problems such as colic or founder. Understanding the nutritional requirements of horses and knowing how to meet those requirements along with a feeding management program is an essential part of caring for horses.

PREREQUISITES

None

FOCUS ASSIGNMENTS

Reading Comprehension
- Gain factual information
- Analyze cause and effect
- Draw conclusions

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition
- Use complete sentences

FOCUS ASSIGNMENTS	
PREREADING:	Read *Nutritional Concerns for Exercising Horses*, OSU Extension Facts No. 3970, or *Nutritional Considerations for Broodmares*, OSU Extension Facts No. 3975. As you read pay special attention to the nutritional considerations for the horse involved.
WRITING:	Write a short (one paragraph to one page) explanation of what nutritional considerations must be taken into account for either the exercising horse or the broodmare.

UNIT OBJECTIVE

After completing this unit, you will show the following competencies by mastering the activities on the Assignment Sheets and by scoring at least 85% on the Written Test.

SPECIFIC OBJECTIVES

1. Complete a diagram concerning the length and capacity of the components of the digestive system.
2. Match digestive enzymes and acids to the foods digested by each.
3. List types of nutrients and their purpose.
4. List functions of nutrients supplied by feed.
5. Classify symptoms of nutritional deficiencies as protein, mineral, vitamin, or carbohydrate deficiencies.
6. Select from a list factors affecting digestion.
7. Distinguish between classifications of feeds.
8. Select from a list factors affecting feed intake.
9. Select from a list metabolic disorders directly attributed to feeding.
10. Discuss factors to consider in selection of commercial feeds.
11. Discuss management practices to consider when feeding.
12. Balance daily ration for a mature horse weighing 1100 pounds. (Assignment Sheet 1)
13. Compare rations for horses with particular circumstances. (Assignment Sheet 2)

INFORMATION SHEET

PRACTICAL HORSE NUTRITION

C1

OBJECTIVE 1

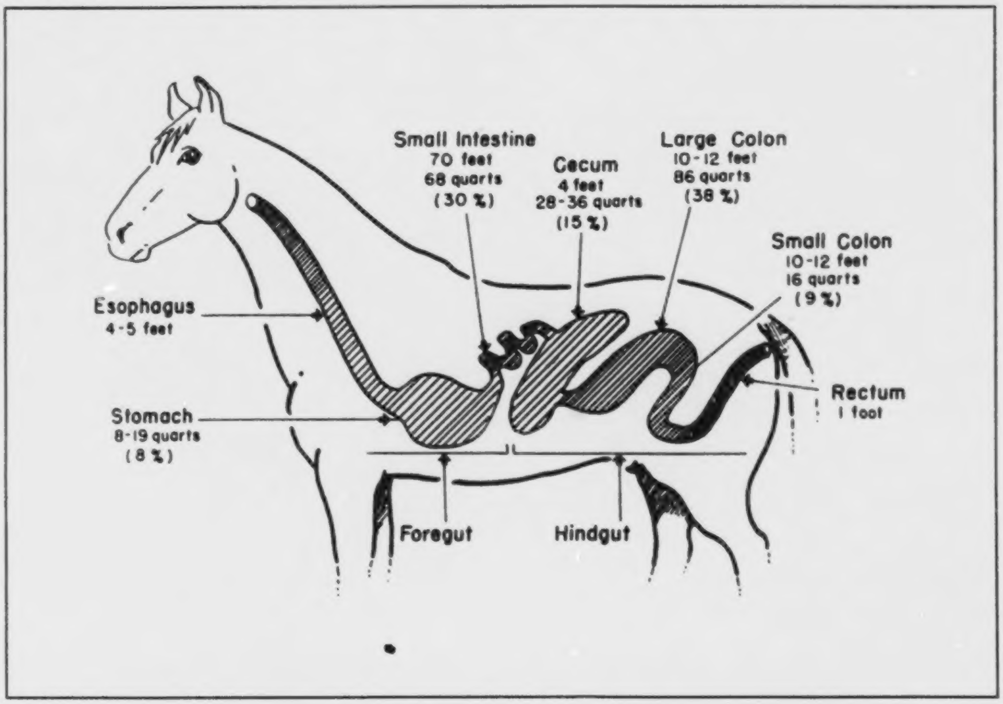
Complete a diagram concerning the length and capacity of the components of the digestive system.

Required Activities/
Resources
- Discussion

Optional Activities/
Resources in
Instructor's Guide

Start the discussion by asking the question "How does the digestive tract of the horse work?"

FIGURE 1


Small Intestine
70 feet
68 quarts
(30 %)
Cecum
4 feet
28-36 quarts
(15 %)
Large Colon
10-12 feet
86 quarts
(38 %)
Small Colon
10-12 feet
16 quarts
(9 %)
Esophagus
4-5 feet
Stomach
8-19 quarts
(8 %)
Rectum
1 foot
Foregut
Hindgut

Used with permission of D.D. Householder and G.D. Potter, Texas A & M University.

OBJECTIVE 2

Optional Activities/
Resources in
Instructor's Guide

Match digestive enzymes and acids to the foods digested by each.

WORDS YOU SHOULD KNOW

amino acids	the building blocks of protein
gastric juices	digestive fluid secreted by the glands in the mucous membrane of the stomach
mucous membrane	lines the cavities in the body and connects the inside of the cavity to the outside

- **amylase** – A minor enzyme contained in the saliva that helps digest carbohydrates
- **pepsin** – An enzyme contained in the gastric juices that helps digest protein
- **gastric lipase** – An enzyme contained in the gastric juices that helps digest fat
- **trypsin** – An enzyme contained in the pancreatic juice that converts protein into amino acids
- **pancreatic lipase** – An enzyme contained in the pancreatic juice that breaks down fats to glycerol and fatty acids
- **pancreatic amylase** – An enzyme contained in the pancreatic juice that breaks down starch
- **bile** – Secreted by the liver, helps to break down fat, aids in fatty acid absorption, and activates pancreatic lipase

OBJECTIVE 3

Optional Activities/
Resources in
Instructor's Guide

List types of nutrients and their purpose.

WORDS YOU SHOULD KNOW	
balanced ration	ration that provides the required nutrients for a specific horse over a 24 hour period
nutrient	applies to any food constituent or group of food constituents of the same general chemical composition that aid in the support of life
ration	feed allowed for a given animal during a day of 24 hours, whether it be fed at one time or in portions at different times

- **Water** – Used for the body's chemical reactions, to regulate body heat, and for use as a lubricant

  ☑ **NOTE:** Fresh, clean water should always by available for horses. Horses will drink about 10-12 gallons of water per day under normal conditions. Horses will drink their weight in water approximately every two weeks.

- **Carbohydrates and Fats** – Primary function is to provide energy.

  ☑ **NOTE:** Carbohydrates are the primary source of energy.

- **Protein** – Composed of units called amino acids which are used as building blocks to develop body tissue

- **Vitamins** – Essential for normal body functions; serve as catalysts for reactions in the body tissue

  ☑ **NOTE:** Horses require small amounts of vitamins.

- **Minerals** – Inorganic matter which aids in skeletal growth and chemical reactions

OBJECTIVE 4

Optional Activities/
Resources in
Instructor's Guide

List functions of nutrients supplied by feed.

- Growth
- Maintenance
- Fuel to maintain body temperature
- Energy for vital body functions
- Energy for work
- Production of milk
- Development of embryo
- Bone development

OBJECTIVE 5

Optional Activities/ Resources in Instructor' Guide

Classify symptoms of nutritional deficiencies as protein, mineral, vitamin, or carbohydrate deficiencies.

NUTRIENT	DEFICIENCY SYMPTOM
Protein	Decreased growth and development of young horses Reduced feed intake Body tissue loss Poor hair coat Poor hoof growth Decreased physical endurance Decreased milk production
Mineral	Rickets (in foals) Abnormal bone growth Weakening of the bones Reduced feed intake Poor hair coat Decreased growth Decreased milk production
Vitamins	Impaired vision Excessive watering of the eyes Poor hair coat Poor hoof growth Digestive disturbances Respiratory illness Rickets Abnormal bone growth Weakness Increased susceptibility to infections Reproduction problems
Carbohydrates (energy)	Loss of weight Loss of condition Lack of energy Poor growth rates Unthrifty appearance

☑ **NOTE:** Oversupplementation of some vitamins and minerals can lead to toxicity.

OBJECTIVE 6

Optional Activities/
Resources in
Instructor's Guide

Select from a list factors affecting digestion.

- Processing of feeds
- Level of intake
- Frequency of feeding
- Individuality
- Amount and type of work
- Time of watering

OBJECTIVE 7

Optional Activities/
Resources in
Instructor's Guide

Distinguish between classifications of feeds.

CONCENTRATES

- Corn
- Oats
- Barley
- Milo
- Protein supplements

  EXAMPLES: Soybean meal, cottonseed meal, linseed meal

- Vitamin and mineral supplements

ROUGHAGES

- Pasture
- Hay

☑ **NOTE:** Feed roughages free choice except after exercise. Do not feed free choice if the horse has digestive disturbances. Check with a veterinarian.

OBJECTIVE 8

Optional Activities/
Resources in
Instructor's Guide

Select from a list factors affecting feed intake.

- Individuality
- Type of work performed

  ☑ **NOTE:** Generally, appetite will increase with higher levels of exercise and decrease with lower levels of exercise.

- Maturity, size, and physical condition
- Season of the year
- Quality of the feed
- Health and temperament of the horse

OBJECTIVE 9

Optional Activities/
Resources in
Instructor's Guide

Select from a list metabolic disorders directly attributed to feeding.

- Colic
- Laminitis (founder)
- Choke

  ☑ **NOTE:** Choke is caused by the esophagus being blocked by food or other foreign material that does not pass into the stomach.

- Nutritional myopathy/exertional myopathy

  ☑ **NOTE:** Nutritional myopathy is a disease of newborn foals which is caused by inadequate intake of selenium by the mare during pregnancy and lactation. Exertional myopathy tends to occur in athletic horses on a full ration high in carbohydrates when the horse, for some reason, has stopped exercising.

- Chronic bronchitis and chronic bronchiolitis (heaves)

  ☑ **NOTE:** One cause of chronic bronchitis and chronic bronchiolitis is exposure to dust, molds, spores, hay, straw and other irritants. Symptoms of heaves include deep, dry cough, wheezing, weight loss , flared nostrils and increased breathing rate.

- Vitamin deficiency
- Mineral deficiency
- Protein deficiency

  ☑ **NOTE:** Protein deficiency is most common in young and very old (geriatric) horses.

- Malnutrition in lactating mare

  ☑ **NOTE:** If a mare's nutrient requirements are not met, it will affect the production of milk. During lactation the demands for all nutrients greatly increase.

- Forage toxicities

  ☑ **NOTE:** Forage toxicities are the most common cause of poisoning in horses. There are many different types of forage toxicity such as fescue toxicity, nitrate toxicity, sorghum toxicity, or locoweed poisoning. Some plants, such as yellow-star thistle and horsetail, are poisonous to horses. Blister beetles, especially in alfalfa hay, are toxic.

OBJECTIVE 10

Optional Activities/ Resources in Instructor's Guide

Discuss factors to consider in selection of commercial feeds.

☑ **NOTE:** Cattle feeds should NOT be fed to horses because of high levels of urea which can be toxic to horses.

- Reputation of the manufacturer

  EXAMPLE: Where is the manufacturer located; is it a local mill; is it a nationally recognized brand?

- Requirements of the horse

  ☑ **NOTE:** The requirements for a horse are based on the following categories: maintenance, breeding stallion, working/performance, lactating, pregnant, growing.

- Flexibility of commercial mixtures
- Analysis of tag
  - ☐ Brand

- Net weight
- Guaranteed analysis

  ☑ **NOTE:** Listings are minimums and maximums and many variables, such as protein quality, need to be considered. Crude protein, crude fat, crude fiber, calcium, phosphorus, and other vitamins and minerals should be listed.

- Ingredients

  ☑ **NOTE:** The group of listings under ingredients only states what is present, not the amounts.

- Name, address, and phone number of the manufacturer

OBJECTIVE 11

Optional Activities/ Resources in Instructor's Guide

Discuss management practices to consider when feeding.

- Feed horses individually.

  ☑ **NOTE:** If feeding a group of horses in a pasture, place individual feeders far enough apart so that horses can eat separately.

- Clean feeders and waterers regularly.
- Clean feeding areas regularly.

  ☑ **NOTE:** Removal of manure will help to reduce parasite infestation.

- Always provide fresh, clean water.
- Avoid feeding hay on the ground.
- Feed at the same times every day.

  ☑ **NOTE:** Feedings should be spread out over equal time spans during a 24-hour period. Two feedings per day is the minimum recommended for stabled horses. Horses consuming large amounts of feed, such as heavily exercising horses, are often fed three times a day.

- Introduce changes in the diet quantity or composition gradually.

- Consider the special requirements of particular horses when feeding.

- Store feed in rodent-proof bins.

- Do not overfeed or underfed.

  ☑ **NOTE:** Obesity is a common dietary problem in horses. Horses should be fed by weight not volume of feed.

- Allow daily exercise which stimulates the appetite and is essential for good health.

- Have a deworming program and regularly inspect horses for health.

- Include salt in all rations.

- Feed vitamin and mineral supplements only as directed by the product label.

ASSIGNMENT SHEET 1

PRACTICAL HORSE NUTRITION

C1

Name ______________________________ Score __________

OBJECTIVE 12

Balance daily ration for a mature horse weighing 1100 pounds.

EQUIPMENT AND SUPPLIES

- Computer
- *Nutrient Requirements of Horses*, 5th edition
- Software program *Nutrient Requirements of Horses*

INSTRUCTIONS

Research and Reference
- Use computer data base

Functional Reading
- Follow written instructions

Functional Math
- Solve practical problems

Life Science
- Investigate health issues

In this assignment you will balance the daily ration for a mature horse weighing 1100 pounds that is on maintenance.

Step 1: Determine the daily nutrient requirements of a maintenance horse (gelding, 1100 pounds) using the software program *Nutrient Requirements of Horses*. Instructions for using the program are included with the disk.

Digestible energy = ________ Mcal

Crude protein = ________ g

Calcium = ________ g

Phosphorus = ________ g

Step 2: Determine what type of ration horse will need (roughage or a combination of roughage and concentrate). Assume you tentatively decide on a total roughage ration. The amount of roughage that will provide the necessary energy is:

$$\frac{\text{Mcal digestible energy required by the horse}}{\text{Mcal digestible energy per kg (or lb) of dry matter in roughage}} = \text{weight of roughage on a dry matter basis}$$

Step 3: Determine what type of roughage to feed. Assume you want to use alfalfa hay (hay, sun-cured, early-bloom). The nutrient contents from *Nutrient Requirements of Horses* are given below.

Dry matter	90.5%
Digestible energy	2.48 Mcal/kg or 1.13 Mcal/lb
Crude protein	19.9%
Calcium	1.41%
Phosphorus	0.21%

Step 4: Determine the amount of dry matter needed for the energy requirements of the horse. (Use the formula given in Step 2)

Weight of roughage on a dry matter basis = __________

Step 5: Check to insure that the remaining nutrient requirements are met by the daily roughage ration.

Crude protein = weight x crude protein content:

Calcium = weight x calcium content:

Phosphorus = weight x phosphorus content:

Step 6: Compare the daily nutrient requirements with what the ration contains.

	Requirement	Ration Contains
Digestible Energy	________	________
Crude Protein	________	________
Calcium	________	________
Phosphorus	________	________

ASSIGNMENT SHEET 2

PRACTICAL HORSE NUTRITION

C1

Name ______________________________ Score __________

OBJECTIVE 13 **Compare rations for horses with particular circumstances.**

EQUIPMENT AND SUPPLIES

- Computer
- *Nutrient Requirements of Horses*, 5th edition
- Software program *Nutrient Requirements of Horses*

INSTRUCTIONS

Use the software program to compare nutrient requirements for two of the categories of horses listed below. Instructions for using the program are included with the disk.

- Maintenance
- Breeding stallion
- Working/Performance
- Lactating
- Pregnant
- Growing

Write a brief (one paragraph to one page) discussion of how the nutrient requirements vary for the particular categories of horses you chose.

Research and Reference
- Use computer data base

Functional Reading
- Follow written instructions

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition
- Use complete sentences

Life Science
- Investigate health issues

OBJECTIVE SHEET

EQUINE GENETICS D1

INTRODUCTION

Top stallions often demand high breeding fees and outstanding broodmares are valued for their foals. This is because they have many desirable characteristics that can be passed on to their offspring. The stallion and mare pass on these characteristics through *genes*. A foal receives fifty percent of its genetic makeup from the stallion and fifty percent from the mare. Equine genetics is the study of how characteristics are passed from one generation to the next. Although top breeding will not guarantee a champion, poor breeding practices are unlikely to produce one.

PREREQUISITES

None

FOCUS ASSIGNMENTS

Reading Comprehension
- Gain factual information
- Analyze cause and effect
- Draw conclusions

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition
- Use complete sentences

FOCUS ASSIGNMENTS	
PREREADING:	Read the Handout *The Perfect Horse*. As you read pay special attention to how breeding cannot guarantee the horse that the owner or breeder may have wanted.
WRITING:	Write a short (one paragraph to one page) discussion of how breeding does not guarantee a desired outcome. How may the horses in the scenarios be used if they cannot be used for what the owner/breeder had intended?

UNIT OBJECTIVE

After completing this unit, you will show the following competencies by mastering the activities on the Assignment Sheets and by scoring at least 85% on the Written Test.

SPECIFIC OBJECTIVES

1. Describe fundamentals of heredity.
2. State possible results of given matings.
3. Analyze matings for desired breeding outcomes. (Assignment Sheet 1).
4. Match breeding systems to their correct definitions.
5. Describe purposes of breeding systems.
6. Evaluate breeding strategies. (Assignment Sheet 2)
7. Examine a pedigree (Assignment Sheet 3)

INFORMATION SHEET

EQUINE GENETICS

D1

OBJECTIVE 1

Describe fundamentals of heredity.

Required Activities/
Resources
– Transparency Master

Optional Activities/
Resources in
Instructor's Guide

WORDS YOU SHOULD KNOW	
environment	surrounding conditions which affect the growth and development of an individual
genetics	the science of the passing of genes from generation to generation
heredity	the passing of genetic information from parents to offspring through the sex cells
heterozygous	an individual that carries one dominant and one recessive allele (Gg)
heterozygous recessive	an individual that carries two recessive alleles (gg)
homozygous dominant	an individual that carries two dominant alleles (GG)
locus	the location of a gene on a chromosome

- **chromosome** – Rod-like structures which exist in pairs, except in sex cells, and carry genes. A horse has 64 chromosomes in each cell which make up 32 pairs of chromosomes. The sperm and egg, sex cells or gametes, contain only one chromosome from each pair. The sex of offspring is determined by the sex chromosomes, known as the X and Y chromosomes. A horse with both an X and Y chromosome is a male and a horse with two X chromosomes is a female. The sperm and egg unite during conception to form a new horse that has 32 pairs of chromosomes (32 from the sperm plus 32 from the egg for a total of 64 chromosomes). (Figure 1)

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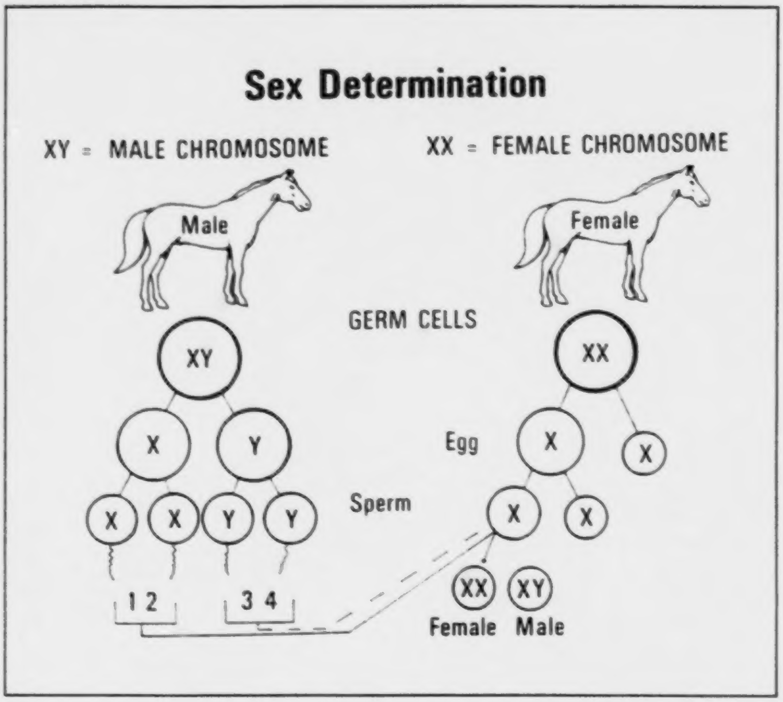
FIGURE 1


Sex Determination
XY = MALE CHROMOSOME
XX = FEMALE CHROMOSOME
Male
Female
GERM CELLS
XY
XX
X
Y
Egg
X
X
Sperm
X X Y Y
X
X
1 2
3 4
XX
XY
Female
Male

- **gene** – Fundamental unit of genetics which determines all hereditary characteristics of animals.

- **allele** – A form of a gene for a specific trait. A horse can carry only two alleles on a locus. If the two alleles are identical (BB), they are homozygous; if the two alleles are different, they are heterozygous.

  ☑ **NOTE:** One allele at a certain locus may hide the presence of another allele at the same locus. An example would be a horse that carries the alleles G (grey) and g (nongrey), the grey allele will hide the nongrey allele and the horse will turn grey with age.

- **dominant** – An allele that covers up the expression of a corresponding recessive allele.

  EXAMPLE: Grey (G) is dominant over nongrey (g), the horse will grey as it ages.

  ☑ **NOTE:** Codominance occurs when heterozygous alleles are expressed by an individual and each contribute equally to the phenotype.

- **recessive** – An allele whose trait is overridden by the corresponding dominant allele.

  EXAMPLE: Nongrey (g) is recessive to grey (G), the horse will grey as it ages.

- **genotype** – An individual's total genetic makeup; what can be passed on to offspring.

- **phenotype** – Outward appearance; genotype plus environment.

  ☑ **NOTE:** Environment may affect phenotype but cannot affect genotype. For example, a horse may have the genotype to reach 16-2 hands but because of poor nutrition, the horse may only reach 16 hands. The phenotype (16 hands) is not the same as the genotype (16-2 hands).

- **qualitative traits** – Traits controlled by one, or only a few, genes; definite distinction between phenotypes.

  EXAMPLES: Sex, color

- **quantitative traits** – Traits affected by many different genes.

  EXAMPLES: Height, speed, fertility, conformation

OBJECTIVE 2

Optional Activities/ Resources in Instructor's Guide

State possible results of given matings.

WORDS YOU SHOULD KNOW	
carrier	an individual that carries the recessive allele for a trait without showing the trait

- With qualitative traits, there are six possible crosses, each producing certain ratios of offspring with and without the trait. The offspring produced depends on whether the parents are dominant or recessive, homozygous or heterozygous.

- An example of the possible results are shown on the following page. The black gene (B) is dominant over the red gene (b). A black horse may be BB or Bb while a red horse will always be bb. B is dominant over b.

1.

	B	B
b	Bb	Bb
b	Bb	Bb

2.

	B	B
B	BB	BB
b	Bb	Bb

3.

	B	B
B	BB	BB
B	BB	BB

4.

	b	b
b	bb	bb
b	bb	bb

5.

	b	b
B	Bb	Bb
b	bb	bb

6.

	B	b
B	BB	Bb
b	Bb	bb

- A horse that is homozygous dominant for a certain trait will always pass that trait to offspring while a heterozygous horse will not necessarily pass on the trait.

OBJECTIVE 3 **Complete Assignment Sheet 1.**

OBJECTIVE 4

Optional Activities/
Resources in
Instructor's Guide

Match breeding systems to their correct definitions.

WORDS YOU SHOULD KNOW	
heterosis	the beneficial effect of mating different species or types on vigor, fertility, growth and overall physical quality
purebreeding	mating of members of one breed which possess common ancestry and distinctive characteristics; either registered or eligible for registry

- **inbreeding** – Mating of individuals who are more closely related than the average of the population

  ☑ **NOTE:** Inbreeding varies from closebreeding to mild linebreeding.

- **closebreeding** – Mating of closely related animals

  ☑ **NOTE:** Closebreeding is not often used by horse breeders because of its extreme nature and the exaggeration of detrimental effects of inbreeding.

- **linebreeding** – Mating of animals directed toward common, admired ancestor
- **outbreeding** – Mating either unrelated or distantly related individuals

  EXAMPLE: Those which have no common ancestors within seven generations.

- **outcrossing** – Mating of unrelated animals within the same breed
- **linecrossing** – A type of outcrossing in which members from two distinct family lines are mated
- **grading** – Outbreeding of a superior stallion to a below average mare
- **crossbreeding** – Mating of horses from different breeds

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- **species hybridization** – Crossing of members of two separate species

  EXAMPLE: Crosses between the jack and mare produce a mule.

OBJECTIVE 5

Optional Activities/
Resources in
Instructor's Guide

Describe purposes of breeding systems.

- **inbreeding** – Increases the chance of desirable characteristics being passed on to offspring

  ☑ **NOTE:** Inbreeding can have detrimental effects such as decreased fertility, vigor, and athletic ability (quantitative traits).

- **closebreeding** – Produces foals which are exceptionally prepotent (ability to pass on desirable characteristics)
- **linebreeding** – To pass a large percentage of an outstanding ancestor's genes from generation to generation while minimizing the frequency of undesirable traits associated with inbreeding
- **outbreeding** – Introduce a new gene type
- **outcrossing** – Introduce new traits, complement horse's weakness with desirable traits; especially helpful in improving quantitative traits

  ☑ **NOTE:** Outcrossing is a safe and effective breeding system used by many horse owners.

- **linecrossing** – Introduce desirable characteristics from one distinct family to another family
- **grading** – Raise the quality of a mare's offspring
- **crossbreeding** – Capitalize on the desirable characteristics of two different breeds

  ☑ **NOTE:** Some performance horses are produced by crossing distinct breed types. The Half-Arabian horse is an example of crossbreeding for performance.

- **species hybridization** – Produce a distinct offspring

  ☞ **NOTE:** Mules are desirable to some individuals because they have remarkable endurance and can withstand harsh conditions.

OBJECTIVE 6 **Complete Assignment Sheet 2.**

OBJECTIVE 7 **Complete Assignment Sheet 3.**

ASSIGNMENT SHEET 1

EQUINE GENETICS

D1

Name ______________________________ Score __________

OBJECTIVE 3

Analyze matings for desired breeding outcomes.

INSTRUCTIONS

Analyze the matings below and then answer the questions that follow.

1. A breeder would like to introduce tobiano spotting. The breeder has several stallions and mares that are solid-colored (tt). Tobiano spotting is either TT or Tt. Assume tobiano spotting is completely dominant to solid color. The breeder has decided to follow the strategy below.

   The solid-colored mare will be bred to a tobiano spotted stallion (TT).

	T	T
t	Tt	Tt
t	Tt	Tt

   A. What percent of the offspring will have tobiano spotting?

   ____

   B. Are the offspring homozygous dominant or heterozygous?

   ____

Reading Comprehension
- Gain factual information
- Analyze cause and effect
- Draw conclusions

Functional Math
- Solve practical problems

Life Science
- Investigate/apply principles of genetics/heredity

The female tobiano offspring will be mated back to solid-colored stallion.

	T	t
t	Tt	tt
t	Tt	tt

C. What percent of the offspring will have tobiano spotting?

D. Why would the breeder not mate the female tobiano offspring to a tobiano spotted stallion (TT or Tt)?

ASSIGNMENT SHEET 2

EQUINE GENETICS

D1

Name ______________________________ Score __________

OBJECTIVE 6

Evaluate breeding strategies.

INSTRUCTIONS

Evaluate the breeding strategies below and then answer the questions that follow.

Reading Comprehension
- Gain factual information
- Analyze cause and effect
- Draw conclusions

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition
- Use complete sentences

Life Science
- Investigate/apply principles of genetics/heredity

1. An owner that has a mare with some undesirable characteristics and that would be considered "below average" is considering breeding the mare (grading). The owner is considering using a stallion that has many desirable characteristics. The stud fee on the stallion is quite high. The owner would like to sell the foal. Is the owner making a sound breeding strategy decision? Why or why not?

____

____

____

2. The owner of an American Saddlebred mare has always admired many of the characteristics of Arabians. The owner wants a foal that will be a good performance horse. The owner wants to crossbreed the Saddlebred mare with an Arabian stallion to produce a Half-Arab foal. Is the owner making a sound breeding strategy decision? Why or why not?

____

____

____

3. An owner has a stallion and mare that are very closely related. Both horses have some desirable quantitative traits the owner would like in offspring. The owner is considering breeding the stallion and mare. Is the owner making a sound breeding strategy decision? Why or why not?

4. An owner of a Thoroughbred broodmare that has produced several outstanding race prospects is considering breeding the mare to a top Thoroughbred stallion (outcrossing). The owner would like to improve the quantitative traits and believes there is a good chance the offspring would demand a high price (more than enough to cover the stud fee and breeding expenses). Is the owner making a sound breeding decision? Why or why not?

ASSIGNMENT SHEET 3

EQUINE GENETICS

D1

Name ______________________________ Score __________

OBJECTIVE 7

Examine a pedigree.

EQUIPMENT AND SUPPLIES

- Handout on reading a pedigree

INSTRUCTIONS

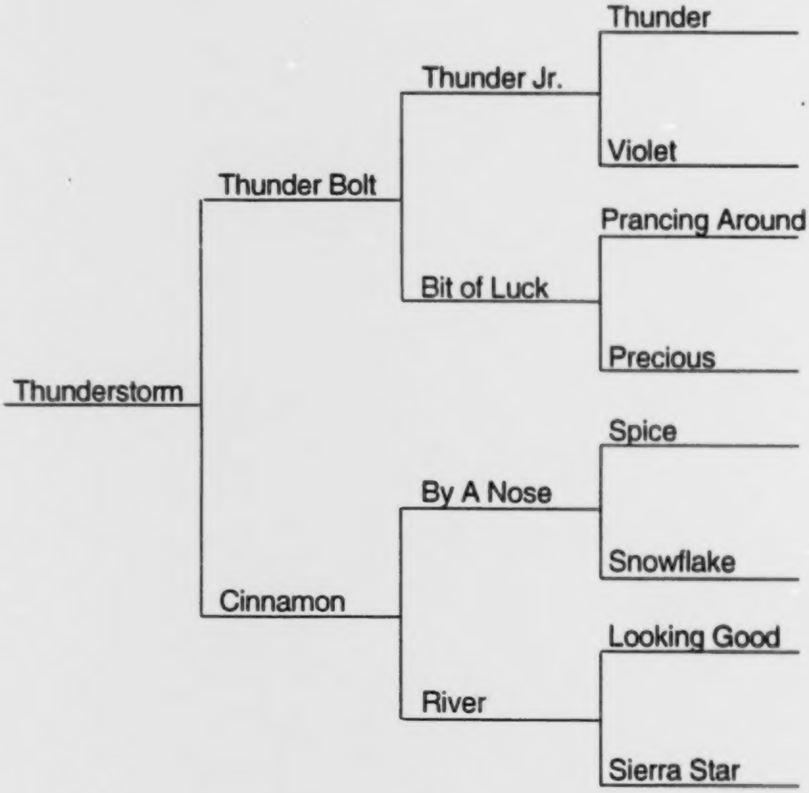
Examine the pedigree below and answer the questions that follow.

Functional Reading

- Interpret forms and records

Life Science

- Investigate/apply principles of genetics/heredity


Thunderstorm
Thunder Bolt
Cinnamon
Thunder Jr.
Bit of Luck
By A Nose
River
Thunder
Violet
Prancing Around
Precious
Spice
Snowflake
Looking Good
Sierra Star

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1. Who is the sire of Thunderstorm? ________________

2. Who is the dam of Thunderstorm? ________________

3. Who is the maternal grandsire? ________________

4. Who is the paternal granddam? ________________

5. What percentage of the genetic makeup does the paternal granddam contribute?

   ____

6. What percentage of genetic makeup does Thunder contribute?

   ____

7. What percentage of genetic makeup does Thunder Bolt contribute?

   ____

8. Who are the maternal great-granddams?

   ____

OBJECTIVE SHEET

STALLION

D2

INTRODUCTION

There are many considerations in the management and care of a breeding stallion. The overall health of the stallion as well as an evaluation of his semen must be considered when breeding. The method used for breeding must also be chosen. A stallion in good health that is managed properly can become a valuable asset in a breeding operation. Stallions require experienced and knowledgeable handlers.

PREREQUISITES

None

FOCUS ASSIGNMENTS

Reading Comprehension
- Gain factual information
- Analyze cause and effect
- Draw conclusions

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition
- Use complete sentences

FOCUS ASSIGNMENTS

PREREADING:	Read the Handout *Breeding of the Equine*. As you read pay special attention to the work involved with breeding season.
WRITING:	Write a short (one paragraph) discussion of the responsibilities and precautions which must be taken on the breeding farm.

UNIT OBJECTIVE

After completing this unit, you will show the following competencies by mastering the activities on the Assignment Sheet and by scoring at least 85% on the Written Test.

SPECIFIC OBJECTIVES

1. List conditions in the male reproductive system that cause infertility.
2. Select from a list factors to consider in keeping a stallion in breeding fitness.
3. Describe the influences of hormones.
4. Describe breeding season behavior of stallions.
5. Describe methods of semen collection.
6. List precautions to take when handling collected semen.
7. Label sperm cell abnormalities.
8. Describe components of semen evaluation.
9. List reasons for adding extender to semen.
10. Arrange in order the steps in breeding season hygiene for a stallion.
11. Explain methods and procedures of breeding.
12. Arrange in order the steps in hand mating.
13. Describe preparation of artificial vagina for collection.
14. Describe preparation of stallion for collection.
15. Explain collecting semen with artificial vagina.
16. Analyze lab results from a stallion's semen sample. (Assignment Sheet)

OBJECTIVE 1

Optional Activities/
Resources in
Instructor's Guide

List conditions in male reproductive system that cause infertility.

WORDS YOU SHOULD KNOW	
infertility	reduced ability of the stallion's sperm to fertilize
impotency	reduced desire or ability to perform the sex act
libido	sexual desire or drive
semen	sperm mixed with fluids from accessory glands
sperm	male sex cell produced in testicles
spermatogenesis	the development of mature sperm cells from primitive germ cells

- Poor semen quality
- Impotency
- Infectious organisms
- Abnormalities of reproductive system

  EXAMPLE: Cryptorchid
- Nutritional deficiency
- Age
- Lack of exercise
- Drugs

OBJECTIVE 2

Optional Activities/ Resources in Instructor's Guide

Select from a list factors to consider in keeping a stallion in breeding fitness.

- Evaluate semen during and prior to breeding season.
- Keep vaccinations current.

  EXAMPLES: Tetanus, eastern and western encephalitis, influenza, rhinopnuemonitis
- Feed a well-balanced, proper diet.
- Exercise sufficiently.
- Observe daily for adverse health symptoms.
- Keep an accurate and current record on each stallion's health and evaluations.
- Keep an accurate documentation of each ejaculation.

OBJECTIVE 3

Optional Activities/ Resources in Instructor's Guide

Describe the influences of hormones.

WORDS YOU SHOULD KNOW	
androgens	male reproductive hormones
anterior pituitary gland	a gland located at the base of the brain which secretes hormones
seminiferous tubules	tubules located in the testes and where the sperm cell production occurs

- Follicle Stimulating Hormone (FSH) – Thought to be responsible for spermatogenesis in the seminiferous tubule of the testis.
- Luteinizing Hormone (LH) – Stimulation of specialized cells in the testicles to produce androgens, one of which is testosterone.

- Testosterone – Regulates masculine characteristics and accessory glands; development of secondary sex characteristics; behavioral characteristics; spermatogenesis.

☑ **NOTE:** Stallions secrete large amounts of estrogen (a female hormone) in their urine. The function of estrogen in stallions is currently unknown.

OBJECTIVE 4

Optional Activities/ Resources in Instructor's Guide

Describe breeding season behavior of stallions.

WORDS YOU SHOULD KNOW	
Flehman response	behavior pattern of stallions in which the stallion curls and raises his upper lip

- When around a mare in heat, a stallion will usually have instinctive interest. The stallion may prance around the mare, holding his head in an alert manner. The stallion may also snort, smell the mare's genitals, and nip at the mare around the neck. When he smells, his upper lip will often curl back (the Flehman response).

- Some stallions have vices which become more pronounced during breeding season. This may include reacting aggressively toward handlers or mares.

  ☑ **NOTE:** Many vices are the result of improper handling. An individual handling stallions must have patience, firmness, and an understanding of stallion behavior.

- Libido is important in the breeding season behavior of stallions. Stallions which have been previously punished for displaying sexual activity may be hesitant to breed. Older or overused stallions may also have decreased sexual drive.

- Stallion behavior is sometimes unpredictable. Stallions must be handled by competent handlers. Safety must always be considered when around stallions. Safety considerations become even more important because of possible injury to the handlers, the stallion, or the mares.

  ☑ **NOTE:** NEVER trust a stallion. Stallions may become aggressive even if mares are not in heat.

OBJECTIVE 5

Optional Activities/
Resources in
Instructor's Guide

Describe methods of semen collection.

- Artificial vagina – device with a leather covering and rubber inner lining to be filled with water to regulate temperature and pressure

  ☑ **NOTE:** The artificial vagina is the best method of semen collection since temperature control and sanitary conditions minimize possible damage to the sperm.

- Condom – large rubber device used to cover the penis and collect semen during copulation
- Dismount sample (drag) – collection of the remainder of semen during dismount; usually caught in a cup or small container

  ☑ **NOTE:** This method is least desirable for collecting semen for evaluation since it usually contains few sperm cells and does not indicate the quality of the accessory sex gland secretions.

OBJECTIVE 6

Optional Activities/
Resources in
Instructor's Guide

List precautions to take when handling collected semen.

- Protect the sample from exposure to light.
- Collect semen in a sterile container.

  ☑ **NOTE:** Any soap, disinfectant, water, etc. should be removed from the container before collecting semen.

- Do NOT subject the sample to excessive movement.
- Keep the sample in a stable temperature environment.

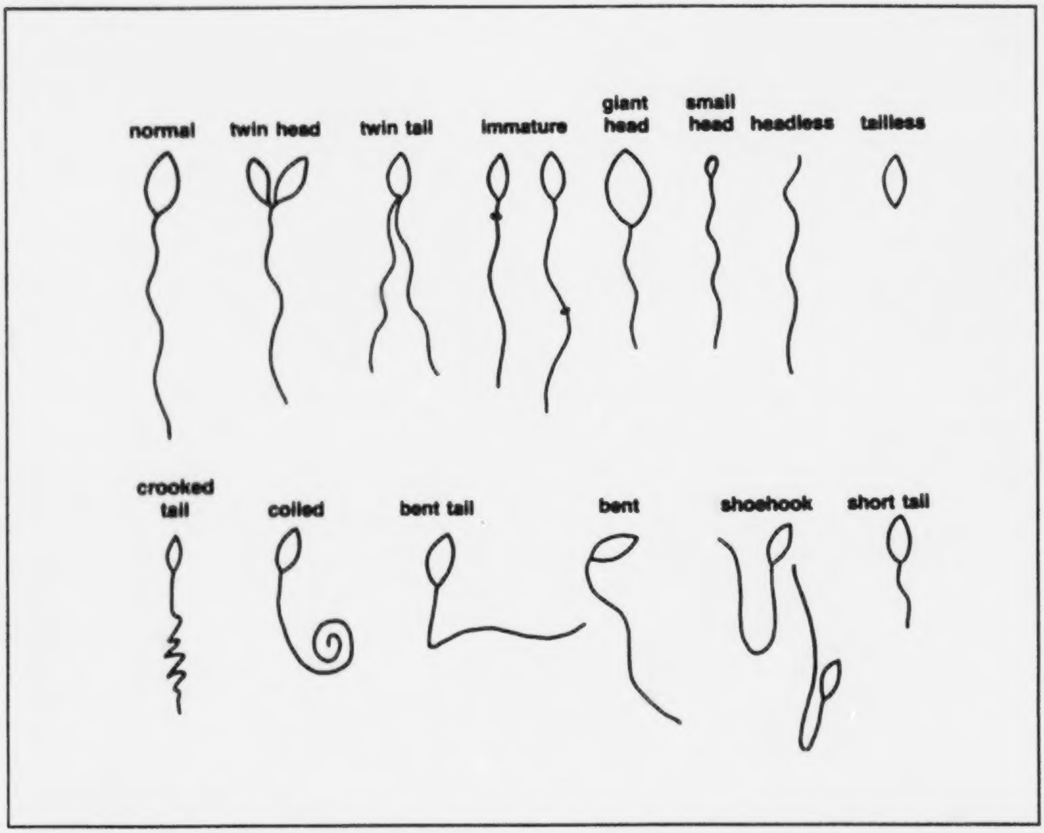
  ☑ **NOTE:** The ideal temperature for sperm cells is 100° F. The collection container should be prewarmed at a slightly higher temperature to allow for a decrease before actual collection. If the sample will not be used immediately (within two hours) it must be gradually cooled and refrigerated for later use (within 24 hours).

- Analyze the sample as soon as possible.
- If extender is to be used, make sure that it is warmed to the appropriate temperature.

OBJECTIVE 7 | **Label sperm cell abnormalities.**

Optional Activities/
Resources in
Instructor's Guide

FIGURE 1


normal
twin head
twin tail
immature
giant head
small head
headless
tailless
crooked tail
coiled
bent tail
bent
shoehook
short tail

Illustrations above used by permission of Equine Research, Inc. from *Breeding Management & Foal Development*, 1982.

OBJECTIVE 8

Optional Activities/ Resources in Instructor's Guide

Describe components of semen evaluation.

WORDS YOU SHOULD KNOW	
copulation	act of engaging in sexual intercourse
ejaculate	semen released during copulation
mm^3	cubic millimeter

- Volume of ejaculate – usually 50 to 150 ml for a light breed stallion

  ☑ **NOTE:** Volume may have a wide range and may be as low as 25 ml or as high as 300 ml.

- Visual appraisal – color of semen should be slightly cloudy and with the consistency of mineral oil; free of blood and foreign matter

- Microscopic examination – used to determine the number of live spermatozoa, the amount and rate of movement, and the number of abnormal spermatozoa

  - Progressive motility – Number of spermatozoa moving; usually 60-100%; sperm should move swiftly forward, preferably in a straight line.

    ☑ **NOTE:** This affects fertility since the spermatozoa must be motile to be fertile. Motility rates of less than 50% may indicate fertility problems.

  - Rate of motility – amount of movement of the spermatozoa

    ☑ **NOTE:** This is an indicator of the strength of the cells.

  - Live-dead percentage – indicates the ability of the testes to produce viable sperm; sample semen should contain at least 60% live sperm.

  - Concentration – number of sperm cells per ml of semen; normal range is 30-600 million per ml of semen.

  - Morphology (abnormal sperm count) – sample of semen should contain at least 65% normal sperm.

- ☐ pH – indicates the acidity or alkalinity of the semen; semen that is highly alkaline may have been contaminated by urine; shifts in alkalinity may indicate reproductive tract infections or other disorders; normal pH range is 6.9-7.8.

  ☑ **NOTE:** 7 indicates neutral (neither acidic nor alkaline). Numbers greater than 7 indicate increasing alkalinity on a scale of 1 to 14.

- ☐ Longevity – sperm cells with a short longevity may affect the reproductive capabilities of the stallion.

  ☑ **NOTE:** In an average semen sample motility may be observed for 8-10 hours.

- ☐ Blood cells – Some red blood cells may be observed in the semen under the microscope but unless more than 500 red blood cells/mm^3 are counted, it should not be a concern. A white blood cell count should be taken if semen is alkaline (excess 7.8) with no indication of urine. A white blood cell count of more than 1500 per mm^3 may indicate an infection.

OBJECTIVE 9

Optional Activities/ Resources in Instructor's Guide

List reasons for adding extender to semen.

WORDS YOU SHOULD KNOW	
extender	mixture that is added to semen for dilution; various formulas for extenders are used, milk-gelatin extenders are often used

- Extends the life of the sperm
- Controls infections that are present in the semen, if extenders contain antibiotics or antibacterial agents
- Increases volume
- Helps immobilize semen
- Buffers the uterine environment of mare

OBJECTIVE 10

Optional Activities/
Resources in
Instructor's Guide

Arrange in order the steps in breeding season hygiene for a stallion.

WORDS YOU SHOULD KNOW	
smegma	secretions of the sebaceous glands; material which accumulates in the preputial area of the stallion's sheath

1. Place the stallion in surroundings where he will achieve an erection.
2. Wash the penis with mild soap and warm water.

   ☑ **NOTE:** It is important to remove smegma from around the urethra. Disposable products such as cotton or paper towels may be used.

3. Rinse the penis with clean water to remove soap.

   ☑ **NOTE:** Soap is a spermicide (kills sperm) and should be completely removed.

4. Wash the penis after copulation.
5. Rinse the penis thoroughly.
6. Disinfect all areas of the stallion that made contact with the mare.
7. Groom the stallion before placing him back in the stall or paddock. Also, reward the stallion by voice and/or physical contact.

OBJECTIVE 11

Required Activities/
Resources
- Discussion

Explain methods and procedures of breeding.

Start the discussion by asking "What do you think are the advantages and disadvantages of each breeding method?"

- Hand breeding – The stallion and the mare are handled by individual handlers during the breeding process.
- Pasture breeding – The stallion is placed in a pasture with a band of mares.

- Artificial insemination – Semen is collected from a stallion and placed in the reproductive tract of a mare.

  ☑ **NOTE:** Association rules should be checked concerning registration of foals before using this method.

OBJECTIVE 12

Optional Activities/
Resources in
Instructor's Guide

Arrange in order the steps in hand mating.

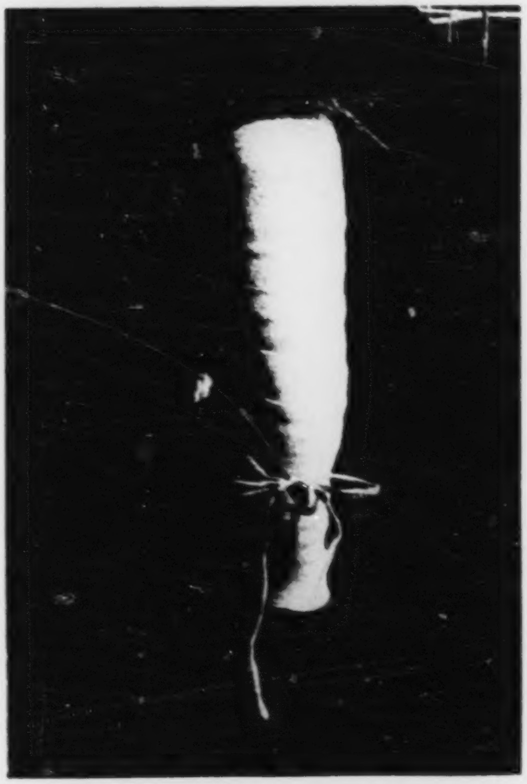
☑ **NOTE:** At least two people are required for this method of breeding; one person to manage the stallion and another person to manage the mare.

1. Tease the mare to ensure that she is in heat.

   ☑ **NOTE:** Palpation by a veterinarian may be used to ascertain breeding status of the mare.

2. Wrap the tail. (Figure 2)

FIGURE 2



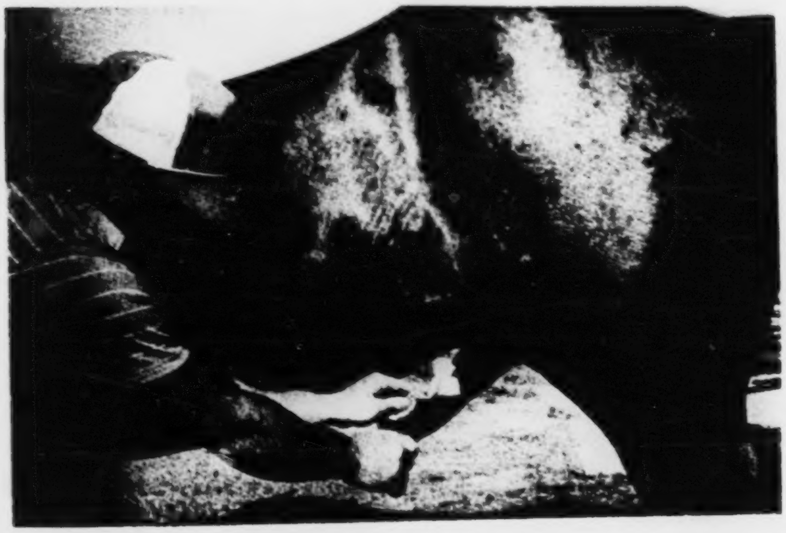
3. Wash the genital area of the mare thoroughly; rinse thoroughly to remove all remaining soap. Include area around genitals where the stallion might make contact before copulation. (Figure 3)

FIGURE 3

4. Wash the stallion with mild soap and water; rinse thoroughly.

☑ **NOTE:** The stallion should be washed before and after servicing the mare.

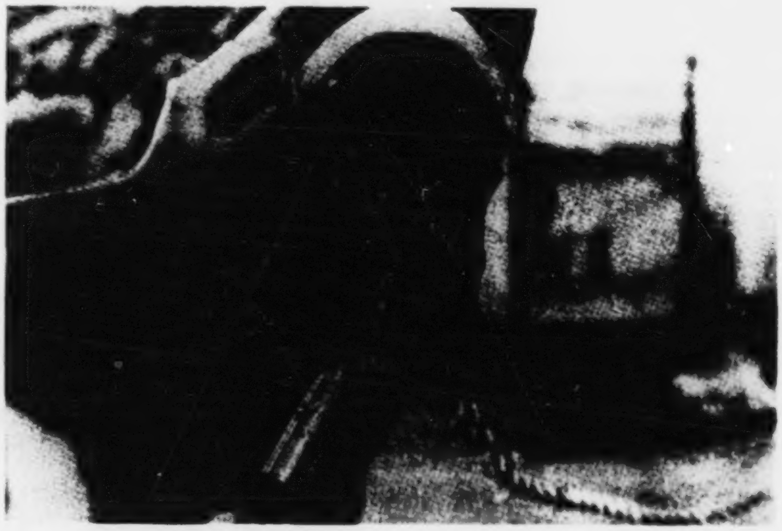
FIGURE 4



5. Apply restraint methods to the mare. (Figures 5 through 8)

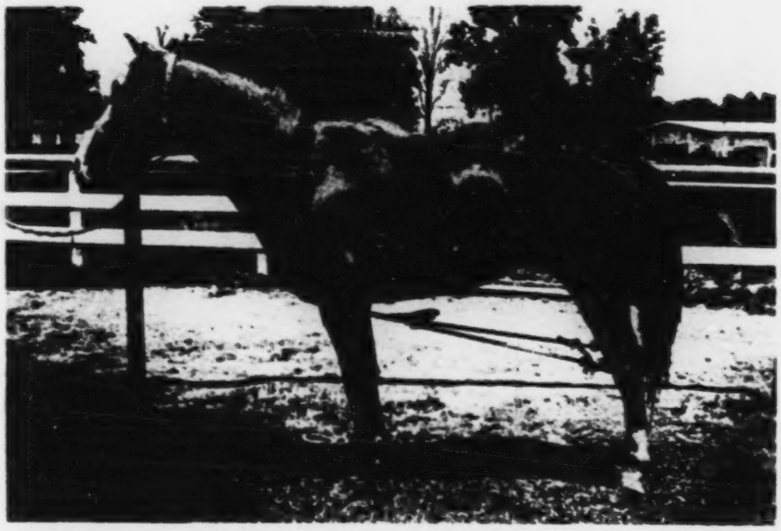
☑ **NOTE:** Figure 5 shows a twitch.

FIGURE 5



☑ **NOTE:** Figure 6 shows hobbles.

FIGURE 6

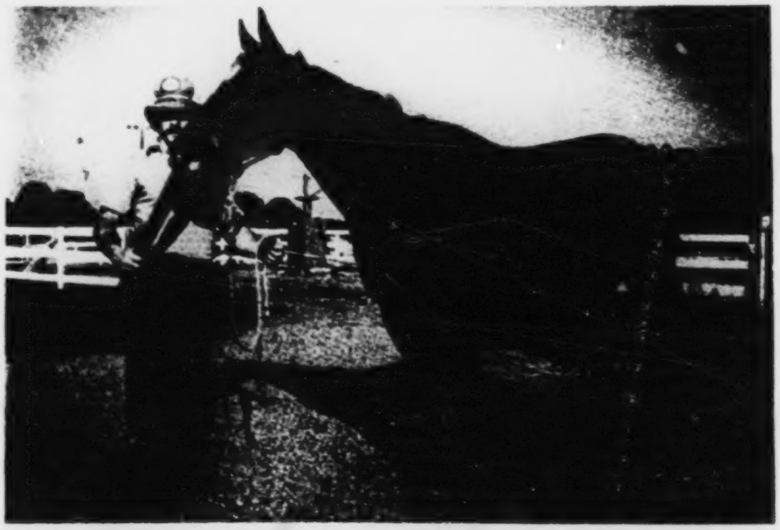


☑ **NOTE:** Figure 7 shows strapping a foreleg off the ground.

FIGURE 7

☑ **NOTE:** Figure 8 shows using a twitch and hobbles.

FIGURE 8



☑ **NOTE:** A sturdy leather halter with a chain lead over the nose, under the chin, or in the mouth should be used to restrain the stallion. The location of the chain will depend on how difficult the stallion is to handle. (Figure 9)

FIGURE 9

6. Allow the stallion to mount on the left side of the mare to avoid being kicked. (Figure 10)

FIGURE 10

7. Allow the stallion to work his way to the rear of the mare. (Figure 11)

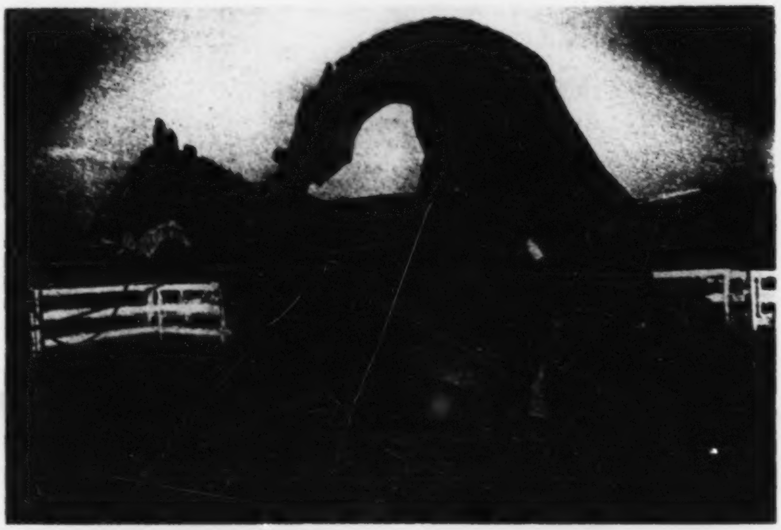
FIGURE 11

910

8. Let the stallion get into the breeding position; observe for a flagging motion of the tail to indicate ejaculation. (Figure 12)

☑ **NOTE:** Allow the stallion to dismount on his own. Do NOT force the stallion to dismount.

FIGURE 12



9. Immediately lead both horses away from each other.

10. Wash and rinse the stallion as soon as he dismounts.

11. Walk the mare for five minutes.

12. Groom the stallion before placing him back in the stall or paddock.

OBJECTIVE 13

Optional Activities/
Resources in
Instructor's Guide

Describe preparation of artificial vagina for collection.

☑ **NOTE:** There are several different models of artificial vaginas: the Missouri model, the Colorado model, and the Japanese model. Follow the specific instructions for the model you are using. The equipment and materials needed to prepare an artificial vagina for collection are an artificial vagina, thermometer, lubricant, sterile gauze, palpation sleeve and warm water.

1. Follow the instructions to assemble the artificial vagina.
2. Lubricate the first three-fourths of the artificial vagina (up to the triangle) with sterile lubricant.
3. Fill the outer jacket of the artificial vagina one-half to two-thirds with water.

   ☑ **NOTE:** Amount of water and pressure should be dictated by the "preference" of the stallion.

4. Attach the leather jacket.
5. Temperature should be maintained between 116°-118° F (44°-48°C).

   ☑ **NOTE:** Some breeding farms use a warming oven to maintain temperature.

6. Take the artificial vagina directly to the prepared stallion or store in warming oven.

   ☑ **NOTE:** Timing is critical in the procedure.

OBJECTIVE 14

Optional Activities/
Resources in
Instructor's Guide

Describe preparation of stallion for collection.

☑ **NOTE:** The equipment and materials needed are mild soap, warm water, two buckets, and cotton or paper towels.

1. Allow the stallion to tease the mare at the teasing rail until an erection is attained.
2. Instruct the handler to restrain from near side (left side) of horse.
3. Stand on the near side of the horse also, grasping penis firmly, but gently.

4. Wash the penis thoroughly but gently. Care should be taken to insure smegma is removed from around the urethra.

   ☑ **NOTE:** Early in the season, several washings may be required to thoroughly clean the stallion.

5. Rinse, making sure all soap is removed.

   ☑ **NOTE:** Washing should be conducted in such a manner that it is enjoyed by the stallion. The penis should never be used to restrain the stallion if he becomes unmanageable.

OBJECTIVE 15 **Explain collecting semen with artificial vagina.**

Optional Activities/ Resources in Instructor's Guide

WORDS YOU SHOULD KNOW	
breeding dummy	a padded support that is mounted by the stallion during semen collection; also referred to as a phantom mare

1. Instruct the handler to follow the procedure as if you were hand mating.

   ☑ **NOTE:** Collector is to work from the near side (left side) of the stallion.

2. Direct the stallion's penis into the artificial vagina once he mounts the mare or breeding dummy.

   ☑ **NOTE:** Do NOT grab penis, direct it with an open hand.

3. Hold the artificial vagina horizontal to the underline of the mare or breeding dummy.

4. Place the right hand on the base of the penis during intermission and thrusting to feel the pulsations of ejaculation.

   ☑ **NOTE:** Ejaculation should last about 15 seconds.

5. Lower the end of the artificial vagina with the collection tube to allow the semen to collect in the designated area.

6. Take semen to the laboratory immediately.

ASSIGNMENT SHEET

STALLION

D2

Name ______________________ Score __________

OBJECTIVE 16

Analyze lab results from a stallion's semen sample.

INSTRUCTIONS

Examine the lab analyses on a semen sample shown on the next page and answer the questions that follow.

Functional Reading
- Interpret forms and records
- Follow written instructions

Stallion: Thunder

Registration Number: 11111

Total Volume: 110 ml

Gel-free volume: 100 ml

Progressive motility: 70%

Morphology: 75% normal

pH: 7.2

Concentration: 300 million/ml

Live-dead percentage: 85% live

1. What areas of concern would you have about this stallion's fertility?

2. Do you think this stallion would make a good breeding prospect? Why or why not?

OBJECTIVE SHEET

MARE

D3

INTRODUCTION

The care of the mare is an important aspect in ensuring a healthy foal. The care of the broodmare should begin before she is bred. Problems that may interfere with a normal gestation period can be identified prior to breeding. Proper care of the mare during gestation will help ensure normal parturition and a healthy foal and mare after parturition. Some reproductive problems such as malfunctioning ovaries are inherent while others such as nutritional deficiency are caused by poor management. If given excellent care both prior to and during pregnancy, most mares will produce healthy, useful, and profitable foals.

PREREQUISITES

None

FOCUS ASSIGNMENTS

Reading Comprehension

- Gain factual information
- Analyze cause and effect
- Draw conclusions

Language

- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition

- Use complete sentences

FOCUS ASSIGNMENTS	
PREREADING:	Read the handout *Broodmares*. As you read pay special attention to the expense and care involved with brood mares.
WRITING:	Write a short (one paragraph) discussion of the expense and care involved in having broodmares.

UNIT OBJECTIVE

After completing this unit, you will show the following competencies by mastering the activities on the Assignment Sheets and by scoring at least 85% on the Written Test.

SPECIFIC OBJECTIVES

1. List conditions in the female reproductive system that cause infertility.
2. Describe the mare's reproductive cycle.
3. Describe the influences of hormones.
4. Select from a list signs of estrus in the mare.
5. List in order breeding season hygiene for mares.
6. Describe normal breeding characteristics of mares.
7. Select from a list management practices to consider in teasing mares.
8. Select from a list items to be included in record keeping during breeding season.
9. Interpret record keeping data on mares. (Assignment Sheet 1)
10. List ways to detect pregnancy.
11. List important items relating to care of mare and foal during gestation.
12. List noninfectious causes of abortion.
13. Match infectious causes of abortion to the correct descriptions.
14. Select from a list measures to take to prevent abortion.
15. Discuss the use of cultures and biopsies in the mare.
16. Describe the use of new technologies in reproductive management of the mare.
17. Develop a plan of care for a pregnant mare. (Assignment Sheet 2)

INFORMATION SHEET

MARE

D3

OBJECTIVE 1

Optional Activities/ Resources in Instructor's Guide

List conditions in the female reproductive system that cause infertility.

- Abnormalities of the female reproductive tract

  EXAMPLES: Torn cervix, infantile genitals, persistent hymen, sunken anus which causes vaginal self-contamination (often referred to as urine poolers)

- Rectal vaginal fistula (rupture of the vaginal wall between the vagina and the rectum

- Neoplasms (tumors)

- Nonfunctioning or malfunctioning ovaries

  EXAMPLE: Persistent corpus luteum

- Uterine infection

- Nutritional deficiency

- Old age

- Obesity (too fat)

- Drugs

  EXAMPLES: Anabolic steroids, hormones

- Excessive stress

  EXAMPLE: Surgery, drastic change in surroundings, overwork

- Hormone problems

  EXAMPLE: Low progesterone levels

OBJECTIVE 2

Optional Activities/
Resources in
Instructor's Guide

Describe the mare's reproductive cycle.

WORDS YOU SHOULD KNOW	
corpus luteum	a structure formed after ovulation which produces the hormone progesterone (also called yellow body)
estrous cycle	the reproductive cycle of the mare consisting of proestrus, estrus, metestrus, and diestrus; usually 18-21 days
follicle	small sac
ovulation	rupture of follicle and release of egg from the ovary
ovum (egg)	germinal cell that is produced in the ovary

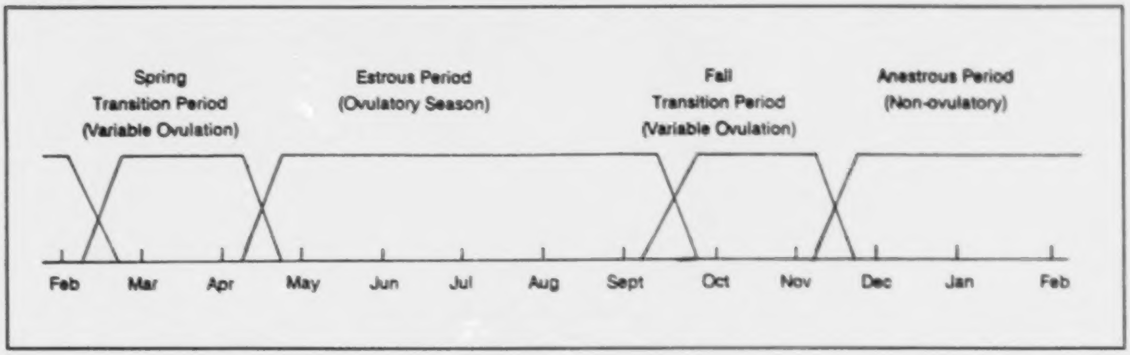
- Mares are seasonal polyestrous breeders; the mare's reproductive cycle is affected by the length of daylight hours, nutrition, temperature, and environmental factors. (Figure 1)

  ☑ **NOTE:** Seasonal polyestrous means that the mare cycles only part of the year. In the northern hemisphere the ovulatory season usually starts in mid-April and continues through late summer.

- Anestrus is the period when the mare shows no signs of reproductive activity. Anestrus begins in the early fall and ends around March.

  ☑ **NOTE:** If a mare is in anestrus during the regular breeding season, the cause should be determined.

FIGURE 1



Courtesy of Oklahoma State University Cooperative Extension Service.

ESTROUS CYCLE (Figure 2)

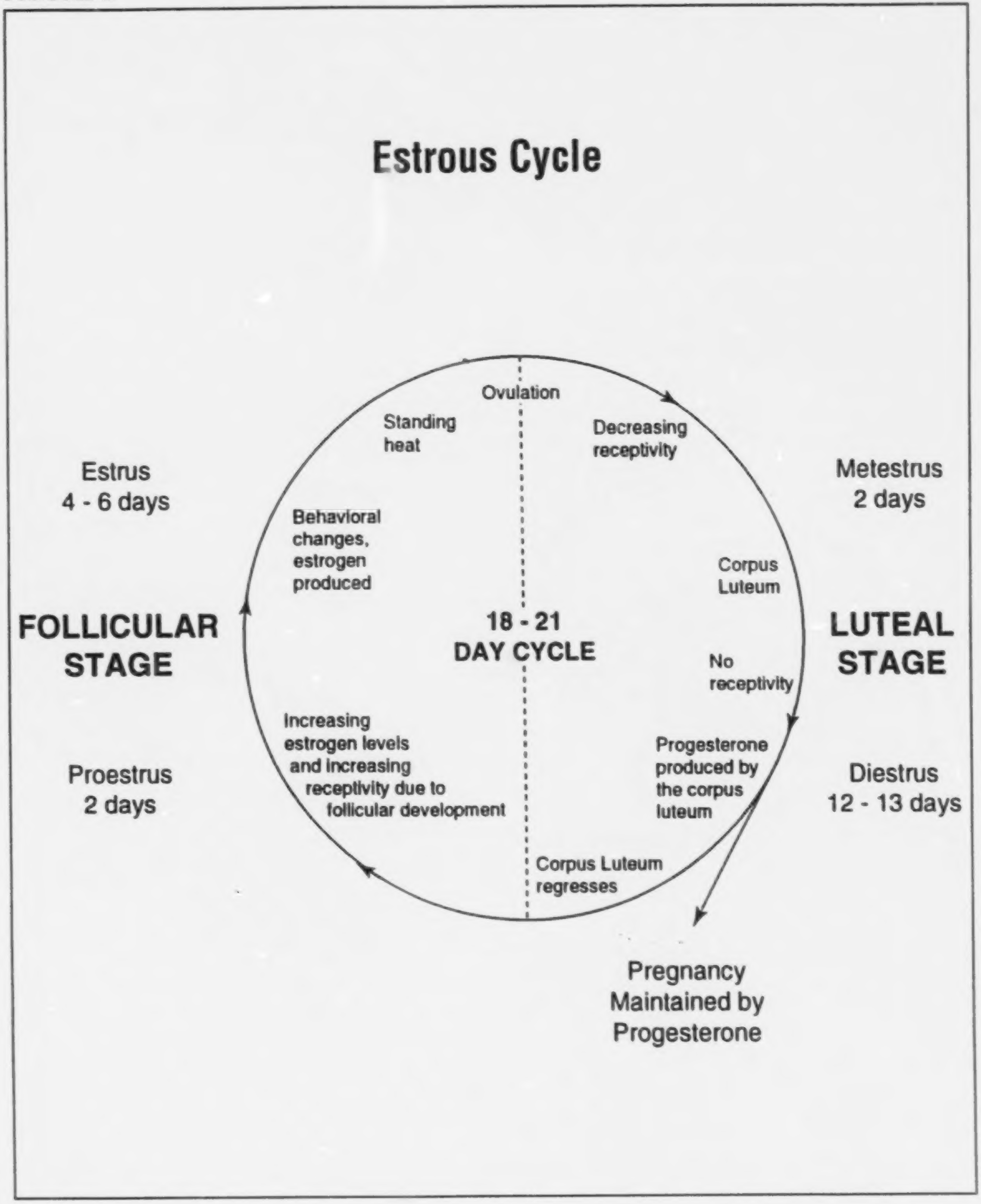
FOLLICULAR STAGE (Proestrus and Estrus)

- *Proestrus* is the period just before estrus that lasts about two days and is characterized by a steady rise in estrogen levels.
    - There is a gradual change in the mare's behavior as she becomes more receptive to the stallion.
    - Preliminary follicle growth also occurs during proestrus.
- *Estrus* is the period when the mare is in heat. During estrus the mare's behavior changes and she becomes receptive to the stallion. Estrus usually lasts from four to six days.
    - The follicle matures and the ovum gradually releases from the follicle during ovulation.
    - Ovulation usually occurs 24-48 hours before the end of estrus. Ovulation marks the transition from the follicular stage to the luteal stage.

LUTEAL STAGE (Metestrus and Diestrus)

- *Metestrus* occurs before diestrus and lasts approximately two days. It is characterized by formation of the corpus luteum and increasing levels of progesterone.
    - Behaviorally the mare is beginning to resist the stallion.
- *Diestrus* is a 12-13 day period in which the corpus luteum is fully functional.
    - If the ovum becomes fertilized and produces a viable embryo, the mare's uterus recognizes the pregnancy and the corpus luteum remains functional supporting the pregnancy with progesterone until the placenta starts production of pregnant mare serum gonadotropin (PMSG) which is a progesterone-like hormone.
    - If the mare does not become pregnant the uterus produces prostaglandins which will cause the corpus luteum to regress and a new estrous cycle will begin. The progesterone drops, estrogen levels increase, and the cycle starts over again.
    - The mare is not responsive to the stallion during the diestrus.

FIGURE 2



Estrous Cycle

Ovulation
Standing heat
Decreasing receptivity
Estrus 4 - 6 days
Metestrus 2 days
Behavioral changes, estrogen produced
Corpus Luteum
FOLLICULAR STAGE
18 - 21 DAY CYCLE
LUTEAL STAGE
No receptivity
Increasing estrogen levels and increasing receptivity due to follicular development
Progesterone produced by the corpus luteum
Proestrus 2 days
Diestrus 12 - 13 days
Corpus Luteum regresses
Pregnancy Maintained by Progesterone

OBJECTIVE 3

Optional Activities/
Resources in
Instructor's Guide

Describe the influences of hormones.

- **Follicle Stimulating Hormone (FSH)** – Stimulates the ovary to secrete estrogen; primarily responsible for follicular development.
- **Estrogen** – Produces behavioral signs of estrus (heat) and is needed to develop follicle in the ovary.
- **Luteinizing Hormone (LH)** – Causes ovulation and formation of corpus luteum
- **Progesterone** – Produced by corpus luteum; primary hormone that is responsible for the recognition and maintenance of early pregnancy up to about 150 days; called the "pregnancy hormone"; one function of progesterone is to prepare the lining of the uterus to receive and support the fertilized ovum.

  ☑ **NOTE:** After approximately 150 days up to term the source of progestins for pregnancy maintenance is the placenta.

- **Prostaglandin** – Causes regression and disappearance of the corpus luteum

  ☑ **NOTE:** The mare can have abnormal conditions that cause the uterus not to produce enough prostaglandin for the corpus luteum to disappear. This will cause higher levels of progesterone and increased length of diestrus preventing the mare from coming into heat.

OBJECTIVE 4

Optional Activities/
Resources in
Instructor's Guide

Select from a list signs of estrus in the mare.

☑ **NOTE:** Mares have a stronger tendency to show signs of estrus in the company of a stallion.

- Relaxation of external genitalia
- More frequent urination
- Receptive attitude toward stallion
- Slight mucous discharge from vagina

- "Winking" of the labia

  ☑ **NOTE:** "Winking" refers to eversion of the clitoris. Winking is specific to the equine.

- Raising tail
- Squatting
- Spreading hind legs apart

OBJECTIVE 5

Optional Activities/ Resources in Instructor's Guide

List in order breeding season hygiene for mares.

1. Wrap the upper one-third of the mare's tail with clean wrap or use palpation sleeve.
2. Wash external labia with mild soap and warm water, making sure to clean all areas which the stallion's penis will or may contact. Wash from the inside out.

   ☑ **NOTE:** Disposable products, such as cotton or paper towels, may be used.

3. Rinse thoroughly to remove all remaining soap particles.
4. Dry genital area in preparation for breeding.
5. Remove tail wrap or palpation sleeve after breeding.

OBJECTIVE 6

Optional Activities/ Resources in Instructor's Guide

Describe normal breeding characteristics of mares.

- **Age of puberty** – between 10 and 24 months of age; 18 months is average
- **Age to breed mares** – not earlier than three years of age
- **Gestation period** – time from conception until parturition; average is approximately 340 days, with a normal range from 325-350 days

  ☑ **NOTE:** Foals born before 325 days are considered premature; foals born before 300 days of gestation will probably be too young to survive; a gestation of 360 days is considered long but normal deliveries can occur after a year of gestation.

- **Foal heat** – mares usually show signs of estrus 9-11 days after foaling, may vary 3-13 days

OBJECTIVE 7

Optional Activities/
Resources in
Instructor's Guide

Select from a list management practices to consider in teasing mares.

WORDS YOU SHOULD KNOW	
tease	refers to the practice of using a stallion to help determine when the mare is in estrus

- Tease mares every other day.
- Use a solid barrier four feet high to separate the mare and stallion while teasing.
- Note the reaction of the mare before, during, and after the presence of the stallion.
- Use a teaser that shows continued interest with a moderate degree of nickering and demonstration of masculinity.
- Tease the mare by allowing stallion to start at mare's head and progress toward the rear working back and forth.
- Keep accurate records.

OBJECTIVE 8

Optional Activities/
Resources in
Instructor's Guide

Select from a list items to be included in record keeping during breeding season.

WORDS YOU SHOULD KNOW	
barren	mare that is not bred; often refers to mares that are unable to bear foals
dry or open	mare that is not bred
heavy	mare that is carrying a foal
wet	mare that is nursing

- Foaling process

  EXAMPLE: Date, weight of placenta, condition of placenta, degree of difficulty of birth, placental retention

- Date and results of cultures and biopsies
- Whether the mare is open, maiden, or lactating
- Date of the last estrus period
- Number of days between estrus periods
- Length of estrus
- Reaction to the stallion (if known)
- Any bad habits the mare may possess
- Health comments

OBJECTIVE 9

Complete Assignment Sheet 1.

OBJECTIVE 10

Optional Activities/
Resources in
Instructor's Guide

List ways to detect pregnancy.

- Cessation of heat period
- Rectal palpation
- Laboratory tests

  EXAMPLES: Biological tests, chemical tests
- Movement of live fetus
- Enlargement of mare's stomach and flank area
- Ultrasound

OBJECTIVE 11

Optional Activities/
Resources in
Instructor's Guide

List important items relating to care of mare and foal during gestation.

- Nutrition
- Exercise
- Vaccinations

- Facilities

  EXAMPLE: The mare is kept in a pasture.

- Deworming

OBJECTIVE 12

Optional Activities/
Resources in
Instructor's Guide

List noninfectious causes of abortion.

- Malnutrition
- Ingestion of toxic materials

  EXAMPLE: Fescue grass

- Fatigue or stress
- Injury or trauma
- Heredity
- Twinning
- Physiological causes

  EXAMPLE: Hormonal imbalances

- Genetic anomalies

OBJECTIVE 13

Optional Activities/
Resources in
Instructor's Guide

Match infectious causes of abortion to the correct descriptions.

- **Streptococcus zooepidemicus** – most prevalent bacteria which causes genital tract infection in horses
- **Escherichia coli** – organism which is normally in the intestinal tract but can result in abortion if introduced into the reproductive tract
- **Salmonella abortus-equi** – digestive tract infection that can be controlled or prevented by vaccination
- **Equine viral abortion (rhinopneumonitis)** – respiratory tract infection; abortion usually occurs in the last one-third of pregnancy

- **Brucella abortus** – contagious abortion which causes Bang's disease in cattle and Undulant fever in humans

  ☑ **NOTE:** Brucella abortus is more prevalent in cattle but can cause abortions in the equine.

- **Mycotic placentitis** – fungal infection caused by unsanitary breeding or examination procedures

OBJECTIVE 14

Optional Activities/ Resources in Instructor's Guide

Select from a list measures to take to prevent abortion.

- Avoid breeding an infected mare or stallion.
- Use sanitary conditions in the breeding procedure.
- Vaccinate all mares.
- Provide fresh, clean water and clean nutritious ration.
- Provide proper exercise; avoid fatigue, strain, or excitement.
- Avoid situations or conditions that might cause injury.
- Have a veterinarian check all barren mares.
- Submit all aborted materials for laboratory analysis.
- Thoroughly disinfect the immediate location thoroughly of aborted materials, including the stall, the feet of the mare, and the clothing of the attendant.
- Isolate and quarantine animals until a veterinarian approves the release.

OBJECTIVE 15

Optional Activities/
Resources in
Instructor's Guide

Discuss the use of cultures and biopsies in the mare.

WORDS YOU SHOULD KNOW	
biopsies	living tissue removed for diagnostic evaluation
cultures	microorganisms that are propagated on a medium or gel

- Cultures can be used if a reproductive infection is suspected; the culture can be used to help identify pathogens and identify the most effective treatment.

  ☑ **NOTE:** Breeding farms may require outside mares to be cultured before being bred. Cultures are often taken during estrus because a high level of estrogen increases uterine resistance to pathogens.

- Uterine biopsies can be used as a tool for equine fertility evaluation.

OBJECTIVE 16

Optional Activities/
Resources in
Instructor's Guide

Describe the use of new technologies in reproductive management of the mare.

- Laser surgery is used to correct reproductive problems.
- Embryo transfer – The egg from one mare is placed in the uterus of a recipient mare.
- Estrus synchronization – The donor mare and the recipient mare for an embryo transfer need to be within 24 hours of the same stage of estrus at the time of embryo transfer; usually achieved through the use of prostaglandin.

  ☑ **NOTE:** Estrus synchronization is a part of an embryo transfer.

ASSIGNMENT SHEET 1

MARE

D3

Name ______________________________ Score __________

OBJECTIVE 9

Interpret record keeping data on mares.

INTRODUCTION

Many breeding farms use both teasing scores and palpation for estrus detection. Teasing scores are used to record the behavior of mares. Different facilities will have various methods of recording teasing scores. Scores may be recorded as hot - cold or an a numerical scale such as 0 - 3. The sample tease score below uses a numerical scale of 1 - 5. Mares that have a high teasing score (3 or higher in the example shown below) may be palpated to better determine reproductive status.

Reading Comprehension
- Gain factual information
- Analyze cause and effect
- Draw conclusions

Functional Reading
- Follow written instructions

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

1 – Diestrus behavior, mare is obviously resistant to the stallion; kicking, biting, fighting, trying to get away

2 – Mare is indifferent to the stallion

3 – Mare shows some interest in the stallion, urination and winking

4 – Mare shows obvious interest in the stallion, urination, winking

5 – Mare is receptive to the stallion, urination, squatting, leaning, estrus behavior, relaxed vulva

INSTRUCTIONS

Read the situations below and write a short answer to the questions that follow. Assume all of the situations are during the natural breeding cycle.

1. The mare has her ears back and is kicking at the stallion. What tease score would you record?

   ____

2. The tease scores of three mares are shown below. The farm manager wants to know which mares should be palpated. What would you tell the manager?

Sunset	5
Breeze	2
Star	3

3. A mare owner wants to breed a mare in the next several days. The latest tease score recorded (within the past two days) was a 2. The mare's previous tease score was a 1. What would you tell the owner?

ASSIGNMENT SHEET 2

MARE

D3

Name ______________________ Score __________

OBJECTIVE 17

Develop a plan of care for a pregnant mare.

INSTRUCTIONS

Assume you are the caretaker for a six-year old quarter horse mare. The owner's have just bred the mare and the veterinarian has confirmed that the mare is pregnant. The owner's have asked you to develop a plan of care for the mare. On a separate sheet of paper develop a plan of care for the mare. Include items such as facilities, veterinary care, special precautions, and nutrition. Review objectives 11 and 14 for other areas to consider.

Reading Comprehension
- Gain factual information

Functional Reading
- Follow written instructions

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition
- Use complete sentences

Cognitive Activities
- Develop an action plan

Life Science
- Investigate health issues

OBJECTIVE SHEET

PARTURITION

D4

INTRODUCTION

The birth of a foal is an experience that horse owners and caretakers look forward to with both excitement and apprehension. Most mares foal without any complications, but horse owners and caretakers should be aware of possible complications and be prepared to notify their veterinarian. The horse owner or caretaker should know how to prepare for parturition, the signs of approaching parturition, and how to care for a newborn foal and postpartum mare.

PREREQUISITES

None

FOCUS ASSIGNMENTS

Reading Comprehension
- Gain factual information
- Analyze cause and effect
- Draw conclusions

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition
- Use complete sentences

FOCUS ASSIGNMENTS

PREREADING:	Read the Handout *A Foal of Your Own.* As you read pay special attention to the precautions and actions the mare owner takes.
WRITING:	Write a short (one paragraph) discussion of the actions the mare owner took to aid in parturition.

UNIT OBJECTIVE

After completing this unit, you will show the following competencies by mastering the activities on the Assignment Sheets and by scoring at least 85% on the Written Test.

SPECIFIC OBJECTIVES

1. Discuss steps to take in preparation for foaling.
2. List items to include in a foaling kit.
3. List essential characteristics of individual offering assistance in foaling process.
4. List indications of approaching parturition.
5. Describe actions to take in the foaling process.
6. Identify normal presentation and malpresentations of the foal.
7. Select from a list foaling conditions requiring veterinarian's assistance.
8. Analyze parturition situations. (Assignment Sheet 1)
9. Describe how to care for a newborn foal.
10. Describe how to care for a postpartum mare.
11. Match complications following parturition to their descriptions.
12. List conditions that prevent breeding on foal heat.
13. Analyze scenarios involving newborn foals and postpartum mares. (Assignment Sheet 2)

INFORMATION SHEET

PARTURITION

D4

OBJECTIVE 1

Required Activities/ Resources
- Video
- Discussion

Optional Activities/ Resources in Instructor's Guide

Discuss steps to take in preparation for foaling.

WORDS YOU SHOULD KNOW	
fetus	the unborn foal from approximately day 40 of gestation to birth
full term	refers to the mature state of the fetus at birth
gestation	length of pregnancy; normally 336-340 days in mares

Your instructor will show the video *Foaling Fundamentals: A Video Handbook for Healthy Foaling.*

☑ **NOTE:** Procedures described in this video may be abbreviated (or shortened) for instructional purposes. They should, therefore, never be attempted without qualified professional supervision.

Start the discussion by asking the question "What are the steps to take in preparation for foaling?"

☑ **NOTE:** Watch the video for key points. After the video your instructor will lead a class discussion on the steps to take in preparation for foaling. During this discussion write the steps in the blanks provided.

1. ______________________________
____

2. ______________________________
____

3. ______________________________
____

4. ______________________________
____

5. ____

____

6. ____

____

7. ____

____

8. ____

____

9. ____

____

10. ____

____

OBJECTIVE 2

Required Activities/
Resources
- Video
- Discussion

Optional Activities/
Resources in
Instructor's Guide

List items to include in a foaling kit.

Your instructor will show the video *Foaling Fundamentals: A Video Handbook for Healthy Foaling*.

Start the discussion by asking the question "What items should be included in a foaling kit?"

☑ **NOTE:** Watch the video for items to include in a foaling kit. After the video your instructor will lead a class discussion on items to include in a foaling kit. During this discussion write the items in the blanks provided.

1. ____
2. ____
3. ____
4. ____

5. ______________________________

6. ______________________________

7. ______________________________

8. ______________________________

9. ______________________________

10. ______________________________

11. ______________________________

12. ______________________________

13. ______________________________

14. ______________________________

15. ______________________________

16. ______________________________

OBJECTIVE 3

List essential characteristics of individual offering assistance in foaling process.

Optional Activities/
Resources in
Instructor's Guide

- Clean
- Quiet
- Gentle
- Perseverant
- Knowledgeable
- Skillful
- Experienced

336

OBJECTIVE 4

Required Activities/
Resources
- Video
- Discussion

Optional Activities/
Resources in
Instructor's Guide

List indications of approaching parturition.

☐ Your instructor will show the video *Foaling Fundamentals: A Video Handbook for Healthy Foaling.*

Start the discussion by asking the question "What are the indications of approaching parturition at one month prior to delivery, one week prior to delivery, 12-48 hours prior to delivery and when labor is near?"

☑ **NOTE:** Watch the video for signs of approaching parturition. After the video your instructor will lead a class discussion on indications of approaching parturition. During this discussion write the indications in the blanks provided.

ONE MONTH PRIOR TO PARTURITION

1. ____
2. ____

ONE WEEK PRIOR TO PARTURITION

1. ____
2. ____
3. ____
4. ____
5. ____
6. ____
7. ____
8. ____

12-48 HOURS PRIOR TO PARTURITION

1. ____
2. ____
3. ____

LABOR IS NEAR

1. ____

2. ____

3. ____

4. ____

5. ____

6. ____

7. ____

8. ____

9. ____

OBJECTIVE 5

Required Activities/
Resources
- Video
- Discussion

Optional Activities/
Resources in
Instructor's Guide

Describe actions to take in the foaling process.

WORDS YOU SHOULD KNOW	
amnion	the membranes surrounding the unborn foal
dystocia	abnormal or difficult birth
placenta	an organ which surrounds the unborn foal during gestation
umbilical cord	cord which attaches the fetus to the placenta; the umbilical cord carries urine and blood between the fetus and the placenta enabling nutrient and waste transfer

Your instructor will show the video *Foaling Fundamentals: A Video Handbook for Healthy Foaling.*

☑ **NOTE:** Procedures described in this video may be abbreviated (or shortened) for instructional purposes. They should, therefore, never be attempted without qualified professional supervision.

Start the discussion by asking the question "What are the actions to take in the foaling process?"

☑ **NOTE:** Watch the video for actions to take in the foaling process. After the video your instructor will lead a class discussion on actions to take. During this discussion write the actions in the blanks provided.

1. ______________________________

2. ______________________________

3. ______________________________

4. ______________________________

5. ______________________________

6. ______________________________

7. ______________________________

8. ______________________________

9. ______________________________

OBJECTIVE 6

Required Activities/
Resources
- Video
- Transparency Master

Identify normal presentation and malpresentations of the foal.

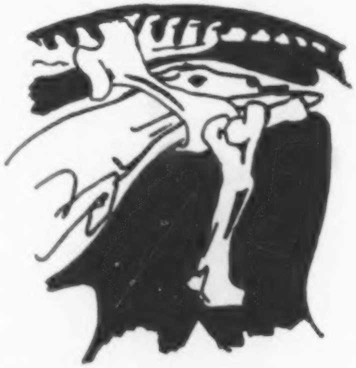
Your instructor will show the video *Foaling Fundamentals: A Video Handbook for Healthy Foaling.*

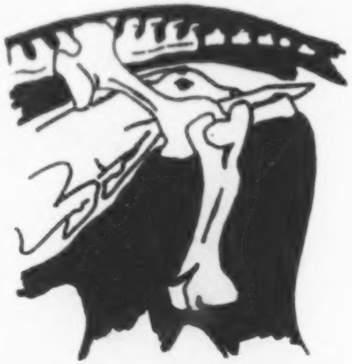
You will see a transparency showing the presentations of the foal.

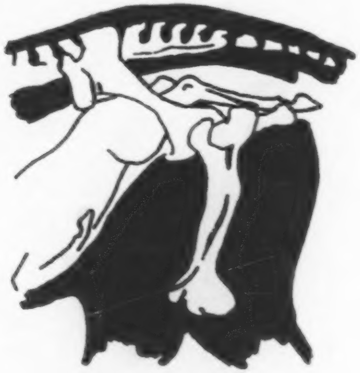
Start the discussion by asking the question "What is the normal presentation of the foal and what are malpresentations of the foal?"

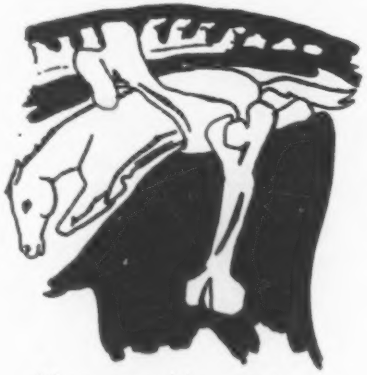
> ☑ **NOTE:** Watch the video for normal presentation and malpresentations of the foal. Remember that malpresentations require a veterinarian's assistance. If the foal shows any signs of abnormal presentation, call a veterinarian immediately. Presentations of the foal are shown in Figure 1.

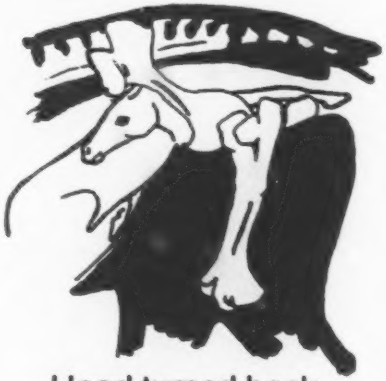
FIGURE 1

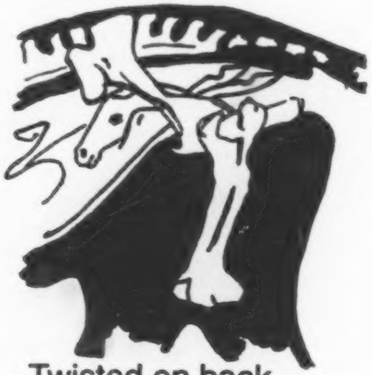

Normal presentation


One or both forelegs back


Breech Birth


Abnormal breech


Head turned back


Twisted on back

Illustrations above used by permission of Video Velocity.

OBJECTIVE 7

Select from a list foaling conditions requiring veterinarian's assistance.

Optional Activities/
Resources in
Instructor's Guide

- Malpresentation of the foal
- Hard labor with no results

  ☑ **NOTE:** Wait no longer than twenty minutes before contacting a veterinarian.

- Slow and difficult labor or delivery

  ☑ **NOTE:** Anything exceeding 30 minutes from rupture of fetal membrane is considered slow and difficult.

- Mare and/or foal failing to get up within an hour
- Foal fails to nurse within two hours
- Mare refuses to accept the foal
- Hemorrhaging of the mare from the vulva or the foal from the navel stump
- Placenta retained for more than two hours

OBJECTIVE 8

Complete Assignment Sheet 1.

OBJECTIVE 9

Required Activities/
Resources
- Video
- Discussion

Optional Activities/
Resources in
Instructor's Guide

Describe how to care for a newborn foal.

WORDS YOU SHOULD KNOW	
patent urachus	urine dribbling from the foal's navel; caused by the urachus not closing when umbilical cord breaks
urachus	a small vessel in the umbilical cord which connects the unborn foal's bladder to the inner sac of the placenta

Your instructor will show the video *Foaling Fundamentals: A Video Handbook for Healthy Foaling.*

☑ **NOTE:** Procedures described in this video may be abbreviated (or shortened) for instructional purposes. They should, therefore, never be attempted without qualified professional supervision.

Start the discussion by asking the question "How do you care for a newborn foal?"

☑ **NOTE:** Watch the video for key points. After the video your instructor will lead a class discussion on caring for a newborn foal. During this discussion write the items in the blanks provided.

1. ______________________________
____

2. ______________________________
____

3. ______________________________
____

4. ______________________________
____

5. ______________________________
____

6. ______________________________
____

OBJECTIVE 10

Required Activities/
Resources
- Video
- Discussion

Optional Activities/
Resources in
Instructor's Guide

Describe how to care for a postpartum mare.

WORDS YOU SHOULD KNOW	
afterbirth	the expelled placenta

Your instructor will show the video *Foaling Fundamentals: A Video Handbook for Healthy Foaling.*

☑ **NOTE:** Procedures described in this video may be abbreviated (or shortened) for instructional purposes. They should, therefore, never be attempted without qualified professional supervision.

Start the discussion by asking the question "How do you care for a postpartum mare?"

☑ **NOTE:** Watch the video for key points. After the video your instructor will lead a class discussion on caring for a postpartum mare. During this discussion write the items in the blanks provided.

1. ______________________________

____

2. ______________________________

____

3. ______________________________

____

4. ______________________________

____

5. ______________________________

____

OBJECTIVE 11

Optional Activities/ Resources in Instructor's Guide

Match complications following parturition to their descriptions.

- **lacerations and tears** – wounds of the vulva caused by the foal being too large or abnormal presentation of the foal
- **foal colic** – contraction of the uterus following foaling
- **retained placenta** – failure of the afterbirth to separate from the uterus following foaling
- **postpartum hemorrhage** – rupture of the uterine arteries
- **foal founder** – small amount of placenta remaining in the uterus following the mare's expulsion of afterbirth
- **agalactia (failure to come to milk)** – hormone imbalance sometimes corrected by the foal attempting to nurse

OBJECTIVE 12

Optional Activities/ Resources in Instructor's Guide

List conditions that prevent breeding on foal heat.

WORDS YOU SHOULD KNOW	
exudate	fluid which is formed due to tissue injury or infection
involution	act of the uterus and mammary glands returning to a normal state after pregnancy or lactation

- Placenta retained over two hours and weighing more than 14 pounds
- Lacerations of the reproductive tract not healed
- Severe bruises or tears, particularly of the cervix
- Excessive exudate or urine present in the vagina
- Uterus lacks tone, involution

OBJECTIVE 13

Complete Assignment Sheet 2.

ASSIGNMENT SHEET 1

PARTURITION

D4

Name ______________________________ Score __________

OBJECTIVE 8

Analyze parturition situations.

INSTRUCTIONS

Read the scenarios below and then write a short explanation of what actions should be taken.

Reading Comprehension
- Gain factual information
- Analyze cause and effect
- Draw conclusions

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition
- Use complete sentences

1. The mare has been in labor for 45 minutes and appears to be having a difficult labor.

   ____

   ____

2. The foal is not being delivered in a normal presentation and appears to be in a breech position.

   ____

   ____

3. The mare has a wax-like substance forming on the end of her nipples.

   ____

   ____

4. The foal is being presented with one foreleg and then another foreleg right behind with the head following.

   ____

   ____

ASSIGNMENT SHEET 2

PARTURITION

D4

Name ______________________________ Score __________

OBJECTIVE 13

Analyze scenarios involving newborn foals and postpartum mares.

INSTRUCTIONS

Read the scenarios below and then write a short explanation of what actions should be taken.

Reading Comprehension
- Gain factual information
- Analyze cause and effect
- Draw conclusions

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition
- Use complete sentences

1. The foal fails to nurse within two hours.

____

____

2. The mare does not expel afterbirth within two hours.

____

____

3. The foal has been napping frequently but is physically active and nursing.

____

____

OBJECTIVE SHEET

CARE OF MARE AND FOAL

D5

INTRODUCTION

Proper care of the mare and foal is important in ensuring the health of both the mare and foal. The mare must be properly taken care of and given adequate nutrients in order for her to care for the foal. Problems that the foal may develop should be prevented, if possible or taken care of early. Foals must be weaned from their dams, and a foal that is healthy and has been eating with its dam will undergo less weaning stress.

PREREQUISITES

None

FOCUS ASSIGNMENTS

Reading Comprehension
- Gain factual information
- Analyze cause and effect
- Draw conclusions

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition
- Use complete sentences

FOCUS ASSIGNMENTS	
PREREADING:	Read the Handout *Imprint Training*. As you read pay special attention to the benefits of imprint training.
WRITING:	Write a short (one paragraph) discussion on your opinion of imprint training.

UNIT OBJECTIVE

After completing this unit, you will show the following competencies by mastering the activities on the Assignment Sheet and by scoring at least 85% on the Written Test.

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SPECIFIC OBJECTIVES

1. Describe management practices important in caring for the mare and neonate foal.
2. Describe management practices important in caring for the mare and foal until weaning.
3. Match common diseases and problems to watch for in foals to their definitions.
4. Match common diseases and problems of foals to their symptoms.
5. Describe considerations in weaning.
6. Describe nutrition requirements for lactating mares and foals.
7. Analyze problem situations involving foals. (Assignment Sheet)

INFORMATION SHEET

CARE OF MARE AND FOAL

D5

OBJECTIVE 1

Optional Activities/ Resources in Instructor's Guide

Describe management practices important in caring for the mare and neonate foal.

WORDS YOU SHOULD KNOW	
entropion	condition in which the eyelid rolls inward and it irritates the surface of the eye
neonate	the foal during its first three to four days after birth
patent urachus	condition in which the urachus fails to close
urachus	small vessel in the umbilical cord that connects fetal bladder to the inner sac of the placenta; the urachus normally closes at birth

- Observe closely for disease and/or injury.

  EXAMPLE: The foal should be alert and responsive to its dam.

- Observe the foal actually nursing the teat and be sure the mare is nursed out.

  ☑ **NOTE:** As a first indicator of a foal's well being, observe for dried milk over the bridge of the foal's nose, indicating the mare is not being nursed out.

- Check navel for dryness and absence of patent urachus.
- Observe for entropion.
- Observe for any signs of discontent in the mare or the foal.
- Observe the foal's legs for any abnormalities such as contracted tendons or pasterns relaxed and appearing coon footed.

  ☑ **NOTE:** Call your veterinarian if leg problems appear serious.

- Watch mare for post-foaling cramping as uterus involutes (contracts down).

  ☑ **NOTE:** Discharge from the mare's vulva during days foal is a neonate is natural as the uterus cleans itself. Exercise aids the mare regarding involution of the uterus.

- Feed the mare a balanced ration.
- Enable the mare and foal to bond during the first few days.

  ☑ **NOTE:** Leave the mare alone with foal and carry out treatment and inspections as quietly and with as little distraction as possible.

- Administer antibiotics and tetanus antitoxin as recommended by a veterinarian.
- Give enemas to prevent meconium impaction as recommended by a veterinarian.

OBJECTIVE 2

Describe management practices important in caring for the mare and foal until weaning.

Optional Activities/
Resources in
Instructor's Guide

WORDS YOU SHOULD KNOW	
foal heat	the first estrus period after foaling

- Decide on re-breeding of mare on foal heat or the cycles that follow.
- Observe closely for disease and/or injury.
- Feed the mare a balanced ration.
- Deworm as recommended by a veterinarian.
- Trim the feet on both the mare and foal at regular intervals of 6-8 weeks.

- Group the mare and foal with other mares and foals.

  ☑ **NOTE:** Avoid pasturing with barren mares, maiden mares, or geldings.

- Gentle and handle foals so that medications and treatments may be administered and feet trimmed.

  ☑ **NOTE:** The foal will be easier to break later if it is handled when young. Preferably, the foal should be halter broken during the early days of its life.

- Ensure that the foal gets adequate exercise.

  ☑ **NOTE:** Exercise is important for the development of the foal because it increases appetite and promotes proper muscle development.

OBJECTIVE 3

Match common diseases and problems to watch for in foals to their definitions.

Optional Activities/ Resources in Instructor's Guide

- **septicemias** – infections that affect the entire body because of bacteria in the bloodstream
- **convulsive syndrome** – convulsions caused by decreased flow of oxygen to the brain prior to or during birth
- **hemolytic anemia** – the foal's red blood cells reject the antibodies in the mare's colostrum

  ☑ **NOTE:** Severe hemolytic anemia in foals is characterized by jaundice, but in severe cases the foal may die before developing jaundice. If hemolytic anemia is suspected, the foal should not be allowed to nurse the mare for the first two days. Insure that the foal receives the vital maternal antibodies by providing colostrum from another source.

- **meconium retention** – fecal matter collected in large intestine during gestation becomes impacted
- **patent urachus** – urachus fails to close
- **ruptured bladder** – result of pressure on a full bladder during delivery or a sharp pull on the umbilical cord after birth

- **colic** – expression of abdominal pain
- **diarrhea** – excessive defecation

  ☑ **NOTE:** Diarrhea is commonly called scours.

- **joint ill** – arthritic condition caused by infectious organisms either ingested by the foal or entered through the navel cord shortly after birth
- **tetanus** – caused by a spore-forming bacterium that produces a toxin

OBJECTIVE 4

Optional Activities/ Resources in Instructor's Guide

Match common diseases and problems of foals to their symptoms.

- **septicemias** – depression, weakness, failure to suckle, rapid breathing, and abnormally high or low temperature
- **convulsive syndrome** – convulsions and respiratory problems
- **hemolytic anemia** – progressive weakness that starts in the first 24 to 48 hours of life and progresses to the foal becoming too weak to stand; increased heart rate and respiratory rate; one sign is jaundice
- **meconium retention** – straining, tail switching, rolling, lying in unusual positions
- **patent urachus** – urine drips from foal's navel
- **ruptured bladder** – foal strains to urinate; becoming depressed and progressively weaker
- **colic** – tail switching, rolling, straining to urinate or defecate

  ☑ **NOTE:** Meconium retention is often a cause of colic in neonate foals.

- **diarrhea** – soft, watery feces, mild dehydration

  ☑ **NOTE:** Diarrhea is commonly caused by the mare's foal heat. Diarrhea caused by disease or infections will cause the foal to become weak and feverish.

- **joint ill** – fever, lameness and stiffness

  ☑ **NOTE:** Joint ill is often caused by patent urachus, the bacteria enter the body through the urachus.

- **tetanus** – stiffness of muscles in jaw, neck, hind limbs, general stiffness, muscle spasms, sweating, increased heart and respiratory rates

  ☑ **NOTE:** This bacterium produces toxin only in the presence of dead tissue and in the absence of oxygen. Because of this tetanus is often associated with puncture wounds.

OBJECTIVE 5

Optional Activities/ Resources in Instructor's Guide

Describe considerations in weaning.

- Start young foals on a nutrition program.

  ☑ **NOTE:** The feed will supplement the dam's milk and the foal will increase feed intake as milk production decreases.

- Teach the foal basic handling before weaning.
- Ensure good health of the foal before weaning.
- Select an optimum time for weaning.

  ☑ **NOTE:** Foals are usually weaned between 4-6 months. When determining age for weaning, evaluate factors such as health of mare and foal, weaning environment, maturity of the foal, disposition of the mare, and management practices on the farm.

- Determine the method of weaning.

  ☑ **NOTE:** Either complete separation of mare and foal or gradual separation where the mare and foal have visual, auditory (hearing) and olfactory (smell) contact while suckling is prevented.

- Lessen weaning stress.

  EXAMPLE: Keeping foal in familiar surroundings, weaning with other foals of similar size and age.

- Check weaning environment for safety hazards.

  ☑ **NOTE:** Weaning stress may cause the foal to hurt itself by trying to jump fences or get through obstacles.

- Observe mare for behavior and health problems.

  ☑ **NOTE:** The mare generally calms down sooner than the foal. The mare's milk production should be checked, watch for mastitis problems.

- Continue disease and parasite prevention programs and proper nutrition for the weanling.

OBJECTIVE 6

Optional Activities/
Resources in
Instructor's Guide

Describe nutrition requirements for lactating mares and foals.

- The mare's nutrient requirement increases by at least 75% when lactating.
- Mare's body weight should be maintained.
- Calcium, phosphorus, and other minerals are required at increased levels.
- The mare cannot consume enough good quality grass hay or grass forage to meet her nutrient requirements.

OBJECTIVE 7

Complete the Assignment Sheet.

ASSIGNMENT SHEET

CARE OF MARE AND FOAL

D5

Name ______________________ Score __________

OBJECTIVE 7

Analyze problem situations involving foals.

INSTRUCTIONS

Read the scenarios below and then answer the questions that follow.

Reading Comprehension
- Gain factual information
- Analyze cause and effect
- Draw conclusions

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition
- Use complete sentences

Case 1

Snowflake, a week old foal has developed diarrhea. Parturition was normal and the foal had shown no signs of disease or illness. What could be a possible cause of the diarrhea? What other symptoms should Snowflake be observed for?

____

____

____

____

Case 2

Marigold, a foal that was born in the morning, is checked on later that afternoon. Marigold is straining, switching her tail, rolling, and lying down and getting up in unusual positions. What is one possible cause of Marigold's actions.

____

____

____

Case 3

Rudy, a young weanling colt, had been in a pasture by himself. The pasture had not been used recently and was not checked for objects that might be dangerous before Rudy was placed in the pasture. He had recently been purchased and the owners did not have any health records on Rudy. They came by to check on Rudy several days after placing him in the pasture. They noticed that he seemed to have stiffness in the muscles in his jaw, neck and hind limbs. What is one possible explanation for the stiffness? What could the owner's have done to ensure that this would not happen?

OBJECTIVE SHEET

IDENTIFICATION, SELECTION, AND MARKETING OF THE HORSE

E1

INTRODUCTION

Each horse is unique in its color, markings, conformation, and abilities. Horses are used for many different purposes and horse owners purchase horses for both their appearance and ability. An owner who shows horses will look for different characteristics than an owner who wants a horse for a child for recreation. Horse owners and caretakers should know the identifying markings and colors of horses.

PREREQUISITES

Equine Management and Production, Unit A2 "Safety."

FOCUS ASSIGNMENTS

Reading Comprehension
- Gain factual information
- Analyze cause and effect
- Draw conclusions

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition
- Use complete sentences

FOCUS ASSIGNMENTS

PREREADING:	Read the OSU Extension Facts No. 9114 *Equine Purchase Examinations*. As you read, pay special attention to the benefits of equine purchase examinations.
WRITING:	Write a short (one paragraph) discussion on the benefits of equine purchase examinations.

UNIT OBJECTIVE

After completing this unit, you will show the following competencies by mastering the activities on the Assignment and Job Sheets and by scoring at least 85% on the Written Test.

SPECIFIC OBJECTIVES

1. Identify and describe common Quarter Horse leg markings.
2. Identify and describe common Quarter Horse head markings.
3. Describe common colors recognized by the American Quarter Horse Association.
4. Describe color patterns of the American Paint Horse.
5. List distinguishing characteristics of the Appaloosa.
6. List colors recognized by the Arabian Horse Registry.
7. List colors recognized by the Jockey Club.
8. Match natural gaits to their descriptions.
9. List factors to consider when selecting a horse to purchase.
10. Complete Quarter Horse registration forms. (Assignment Sheet 1)
11. Describe normal measurements pertinent to a horse.
12. Determine height, weight, and girth. (Job Sheet 1)
13. Describe changes in horse's teeth with advancing age.
14. Complete a chart on determining age of horse by appearance and description of teeth.
15. Determine age of horse by examining teeth. (Job Sheet 2)
16. List general considerations in marketing a horse.
17. List means of marketing the horse.
18. Develop a marketing plan for a horse. (Assignment Sheet 2)

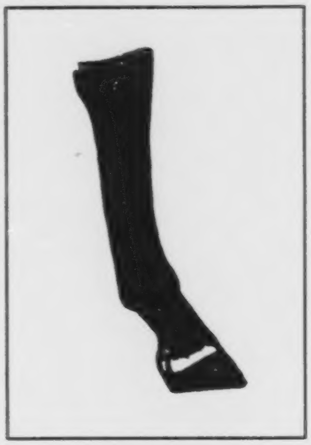
OBJECTIVE 1

Optional Activities/ Resources in Instructor's Guide

Identify and describe common Quarter Horse leg markings.

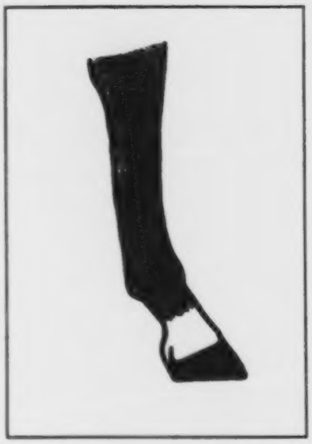
- **coronet** – any narrow marking around the horse's coronet above the hoof (Figure 1)

FIGURE 1



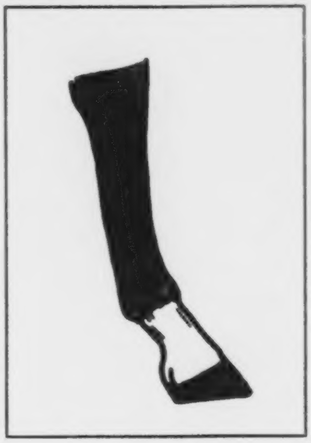
- **half pasterns** – a marking that includes half of the horse's pastern above the coronet (Figure 2)

FIGURE 2



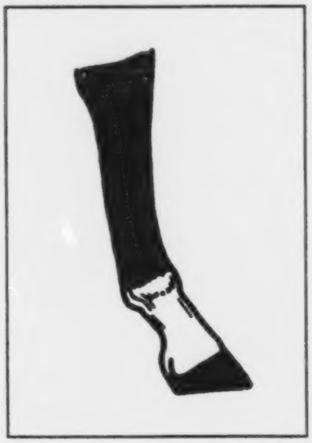
- **pasterns** – a marking that includes the entire horse's pastern (Figure 3)

FIGURE 3



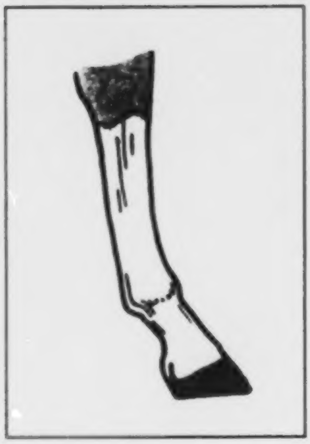
- **socks** – a marking that extends either from the horse's coronet half way to the cannon bone, half way up the knee on the foreleg, or half way to the hock on the back leg (Figure 4)

FIGURE 4



- **stockings** – an extended sock that is a full marking to the area of the horse's knee on the foreleg and to the area of the hock on the hind leg (Figure 5)

FIGURE 5



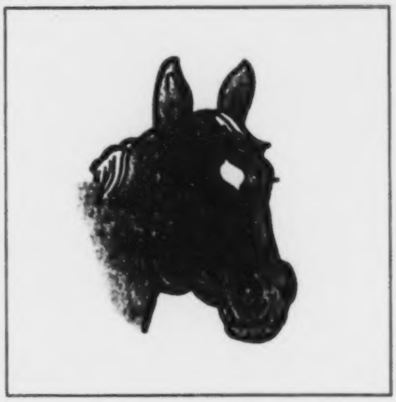
OBJECTIVE 2

Optional Activities/ Resources in Instructor's Guide

Identify and describe common Quarter Horse head markings.

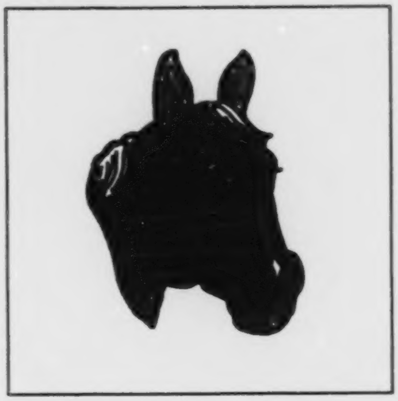
- **star** – any marking on the horse's forehead (Figure 6)

FIGURE 6



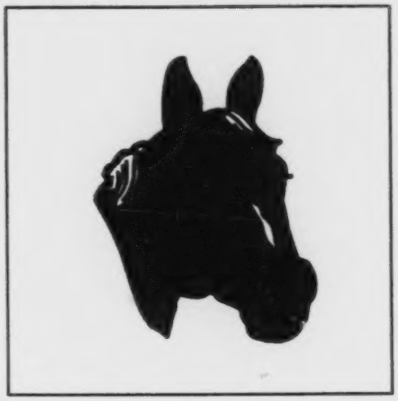
- **snip** – any marking between the horse's two nostrils, usually vertical (Figure 7)

FIGURE 7



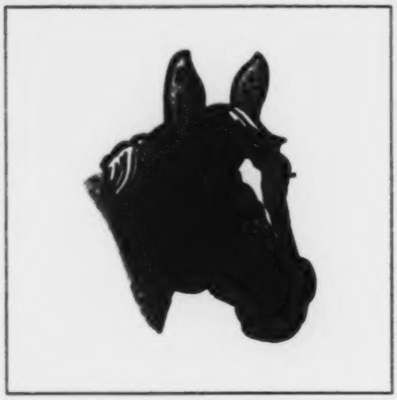
- **strip** – a narrow marking between the horse's forehead and nostrils, extending vertically (Figure 8)

FIGURE 8



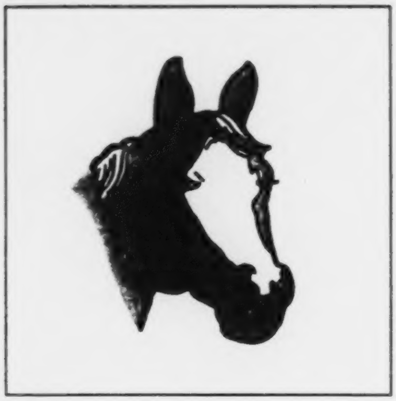
- **star and strip** – a marking on the horse's forehead with a strip to the nasal peak; the strip is not always an extension of the star (Figure 9)

FIGURE 9



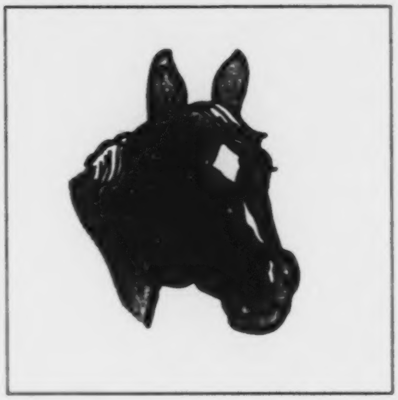
- **bald face** – a broad blaze; it can extend out and around the horse's eyes and also down to the horse's upper lip and around the nostrils (Figure 10)

FIGURE 10



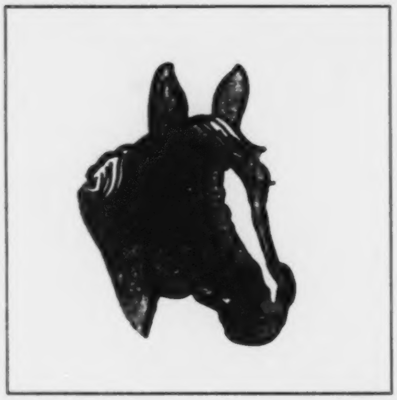
- **star, strip and snip** – a marking on the horse's forehead with a narrow extension of the nasal peak and opening up again between the horse's nostrils; the star, strip and snip may be connected (Figure 11)

FIGURE 11



- **blaze** – a vertical marking that extends the length of the face and is of medium width and is relatively uniform (Figure 12)

FIGURE 12



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OBJECTIVE 3

Required Activities/
Resources
- AQHA chart

Optional Activities/
Resources in
Instructor's Guide

Describe common colors recognized by the American Quarter Horse Association.

☞ Use the *AQHA Colors and Markings Reference Chart* to learn the 13 colors recognized by the American Quarter Horse Association.

☑ **NOTE:** Each association has different regulations and identifications on color. The 13 colors recognized by the AQHA cover the major color types of horses.

1. ______________________________

____

____

2. ______________________________

____

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3. ______________________________

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4. ______________________________

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5. ______________________________

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6. ______________________________

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S6E

7. ______________________________

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8. ______________________________

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9. ______________________________

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10. ______________________________

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11. ______________________________

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12. ______________________________

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13. ______________________________

____

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OBJECTIVE 4

Required Activities/
Resources
- Paint horse handbook
- Discussion

Optional Activities/
Resources in
Instructor's Guide

Describe color patterns of the American Paint Horse.

? Start the discussion by asking the question "What are the color patterns of the Paint?"

☑ **NOTE:** Your instructor will lead a class discussion on color patterns of the Paint. During this discussion, write the 3 color patterns in the blanks provided.

1. Overo - ____________________
2. Tobiano - ____________________
3. Tovero - ____________________

OBJECTIVE 5

Required Activities/
Resources
- Appaloosa handout
- Discussion

Optional Activities/
Resources in
Instructor's Guide

List distinguishing characteristics of the Appaloosa.

Start the discussion by asking the question "What are the distinguishing characteristics of the Appaloosa?"

☑ **NOTE:** Your instructor will lead a class discussion on distinguishing characteristics of the Appaloosa. During this discussion write the 4 characteristics in the blanks provided.

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________

OBJECTIVE 6

Required Activities/
Resources
- Arabian horse handbook
- Discussion

List colors recognized by the Arabian Horse Registry.

Start the discussion by asking the question "What are the colors recognized by the Arabian Horse Registry?"

☑ **NOTE:** Your instructor will lead a class discussion on colors recognized by the Arabian Horse Registry. During this discussion write the 5 colors in the blanks provided.

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________

OBJECTIVE 7

Optional Activities/
Resources in
Instructor's Guide

List colors recognized by the Jockey Club.

- Bay
- Dark bay or brown
- Black
- Chestnut
- Roan
- Gray

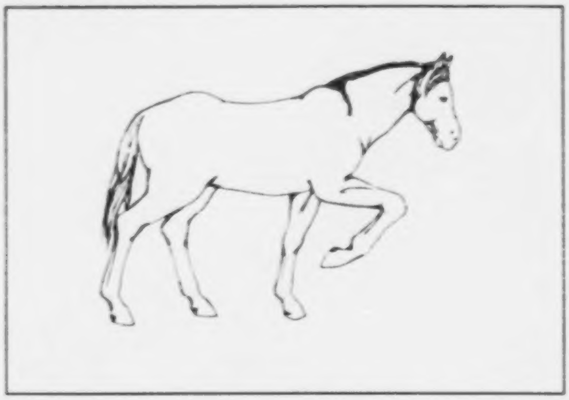
OBJECTIVE 8

Optional Activities/
Resources in
Instructor's Guide

Match natural gaits to their descriptions.

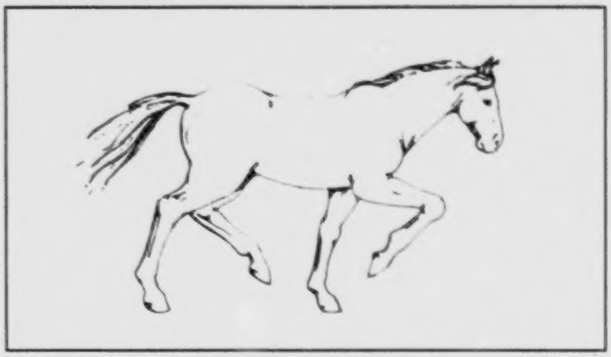
- Walk – slow, four-beat gait in which all four feet are working independently (Figure 13)

FIGURE 13



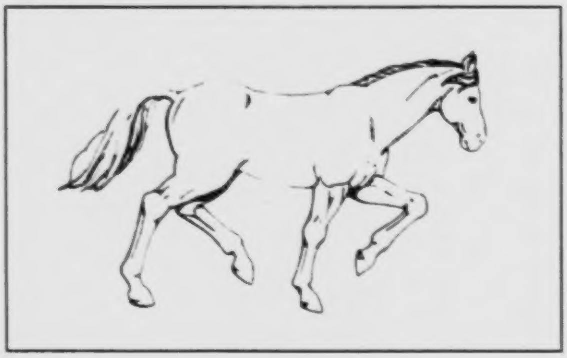
- Trot – even, two-beat gait; diagonal front and rear feet work together (Figure 14)

FIGURE 14



- Pace – even, two-beat gait; lateral front and rear feet work together (Figure 15)

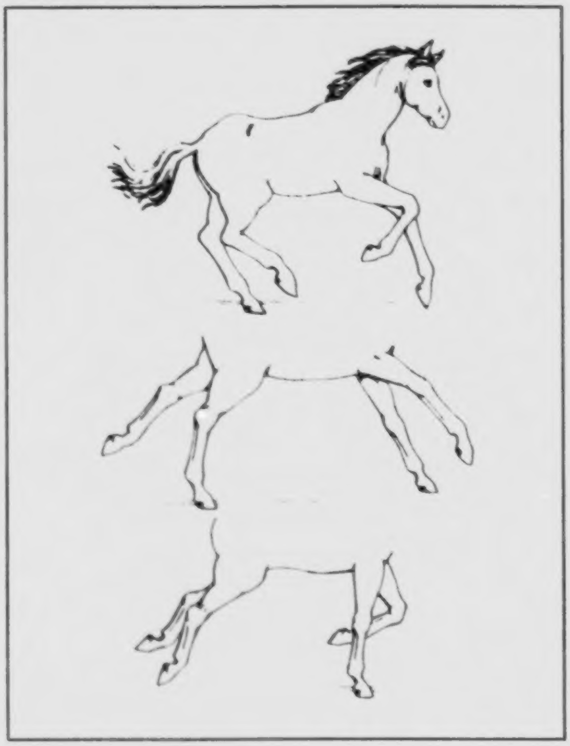
FIGURE 15



- Canter – three-beat gait; opposite front from lead and rear with lead working together and other two legs working independently (Figure 16)

  EXAMPLE: Right lead would find near hind, off hind and near fore together, and off fore as sequence of hoof beats

  FIGURE 16



OBJECTIVE 9

Optional Activities/
Resources in
Instructor's Guide

List factors to consider when selecting a horse to purchase.

- Age
- Breed
- Color
- Conformation
- Cost
- Pedigree

- Performance record
- Reproduction record
- Sex
- Size
- Soundness
- Training
- Use

OBJECTIVE 10

Complete Assignment Sheet 1.

OBJECTIVE 11

Optional Activities/ Resources in Instructor's Guide

Describe normal measurements pertinent to a horse.

- Height – Determined by measuring vertical distance from withers to ground; usually expressed in "hands"

  ☑ **NOTE:** A horse 58" is said to be 14-2 hands (14 hands and 2 inches) high

- Weight – Best determined by placing animals on scales; approximation may be made with weight tape; expressed in pounds
- Girth – Circumference of chest behind withers and in front of back; expressed in inches

OBJECTIVE 12

Complete Job Sheet 1.

OBJECTIVE 13

Optional Activities/ Resources in Instructor's Guide

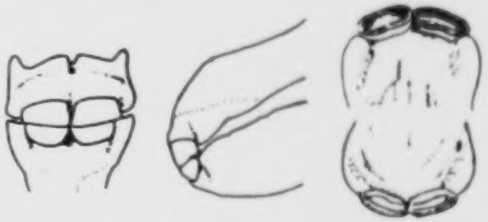
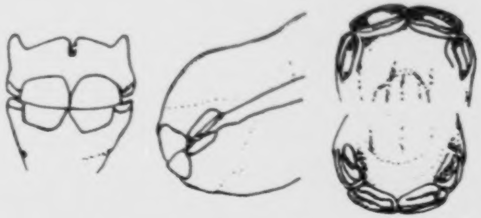
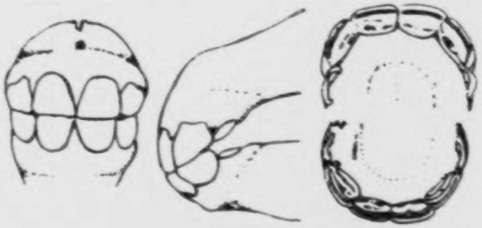
Describe changes in horse's teeth with advancing age.

- Slant out toward front
- Change in wearing surface
- Change in shape of cups
- Change in shape of dental star and tooth

OBJECTIVE 14

Optional Activities/
Resources in
Instructor's Guide

Complete a chart on determining age of horse by appearance and description of teeth.

Drawing of teeth	Age of Animal	Description of teeth
	Birth to 1 month	Central temporary incisors appear
	1 to 3 months	Lateral or intermediate temporary incisors appear
	8 to 9 months	Third or corner temporary incisors appear

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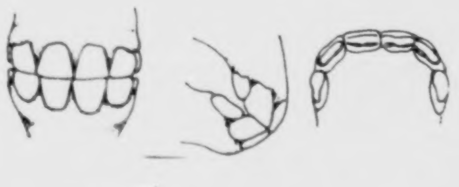
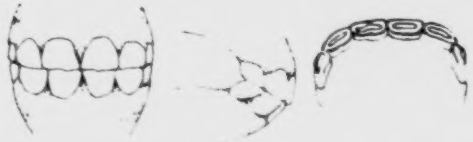
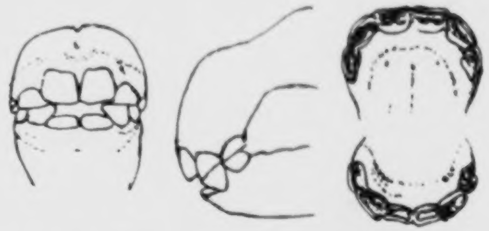
Drawing of teeth	Age of Animal	Description of teeth
	1 year of age	All temporary incisors have appeared with central incisors showing wear
	2 years of age	Shows full mouth of incisors; all are now in wear
	2 1/2 years of age	Central permanent incisors replace temporary

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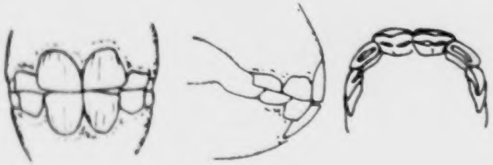
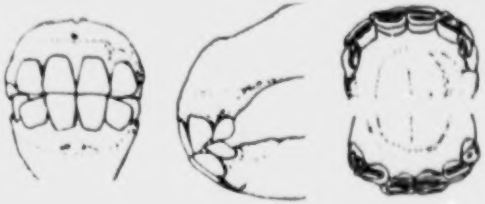
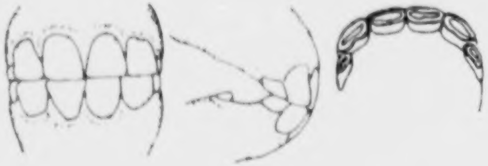
Drawing of teeth	Age of Animal	Description of teeth
	3 years of age	Has central permanent up and in wear
	3 1/2 years of age	Lateral or intermediate permanent incisors appear
	4 years of age	Central and lateral permanent in wear

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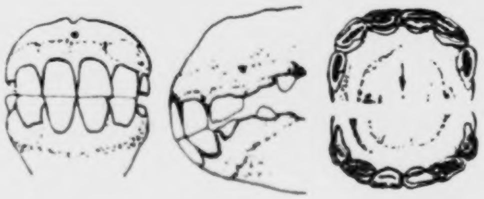
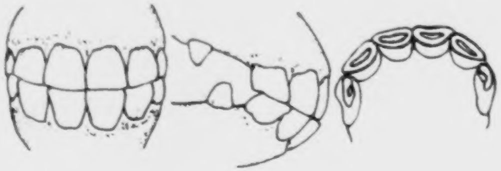
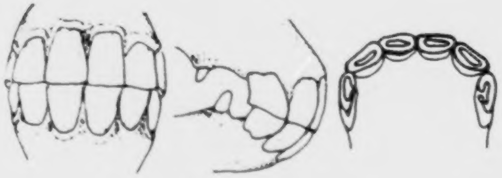
Drawing of teeth	Age of Animal	Description of teeth
	4 1/2 years of age	Third or corner permanent incisors appear; canine teeth appear in males at 4-5 years of age
	5 years of age	Full mouth of permanent incisors in wear
	6 years of age	All show a central infundibular depression or "cup"

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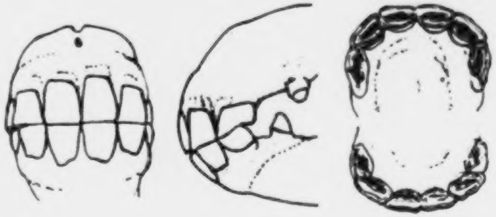
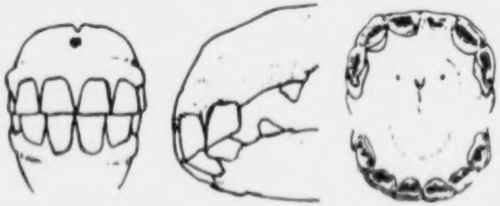
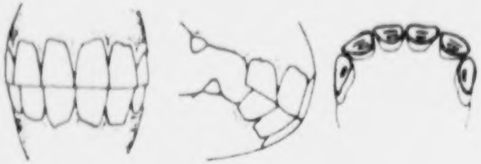
Drawing of teeth	Age of Animal	Description of teeth
	7 years of age	Cups also worn out of lower central incisors
	8 years of age	Cups worn out of lateral incisors, and dental "star" appears on lower incisors
	9 years of age	Cups also worn out of all lower and central upper incisors, and dental "star" appears on upper laterals as well as centrals; low central incisors practically triangular

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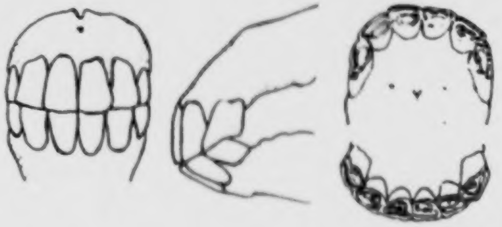
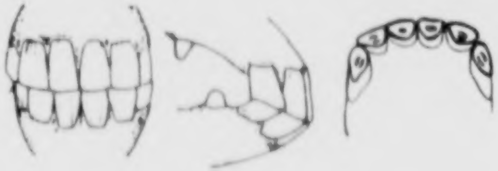
Drawing of teeth	Age of Animal	Description of teeth
	10 years of age	Cups also worn out of upper laterals, and dental "star" is present on all incisors both upper and lower; upper and lower incisors have begun to slope forward
	11 to 12 years of age	Cups worn out of all upper and lower incisors, and dental "star" approaches center of cups; "smooth mouthed"

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OBJECTIVE 15

Complete Job Sheet 2.

OBJECTIVE 16

Optional Activities/
Resources in
Instructor's Guide

List general considerations in marketing a horse.

- Age
- Breed
- Conformation
- Pedigree
- Performance record
- Price
- Reproduction record
- Sex
- Soundness
- Training
- Use

OBJECTIVE 17

Optional Activities/
Resources in
Instructor's Guide

List means of marketing the horse.

- Private treaty sale
- Consign to agent
- Public sale
- Advertise in magazine and/or newspaper
- Syndicate

OBJECTIVE 18

Complete Assignment Sheet 2.

ASSIGNMENT SHEET 1

IDENTIFICATION, SELECTION, AND MARKETING OF THE HORSE

E1

Name ______________________________ Score __________

OBJECTIVE 10

Complete Quarter Horse registration forms.

EQUIPMENT AND SUPPLIES

- Blank registration forms
- Actual horses or photographs of horses

INSTRUCTIONS

Your instructor will provide photographs or actual horses. Complete the registration form. Be sure to fill in the markings and color information.

Functional Reading
- Interpret forms and records
- Follow written instructions

Functional Writing
- Complete forms and records

ASSIGNMENT SHEET 2

IDENTIFICATION, SELECTION, AND MARKETING OF THE HORSE

E1

Name ______________________________ Score __________

OBJECTIVE 18

Develop a marketing plan for a horse.

INSTRUCTIONS

Read the five scenarios below and develop a marketing plan for three of the horses. Consider the value of the horse and the type of potential buyer. Use a separate sheet of paper to develop your plans. Sketch or write out any advertisements you might use in the plan.

Reading Comprehension
- Gain factual information
- Draw conclusions

Functional Reading
- Follow written instructions

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition
- Use complete sentences

Horse 1

Nugget is a 6-year-old palomino stallion. He is a proven sire and several of his offspring have been top performers, winning at both halter and show.

Horse 2

Princess is an 11-year-old chestnut mare. She is well-broken but does not have any specialized training. She has been used as a recreational horse.

Horse 3

Rocking Along is a weanling colt Thoroughbred. His sire is a proven winner at the track and his dam has a very good pedigree. Rocking Along has excellent conformation and is a good race prospect.

Horse 4

Misty is a 6-year-old Paso Fino mare. She has had two foals. She is well-broken and has an excellent disposition and conformation.

Horse 5

Seabreeze is an 8-year-old bay Quarter Horse gelding. Seabreeze has won numerous cutting awards and recently took top place at a national show.

JOB SHEET 1

IDENTIFICATION, SELECTION, AND MARKETING OF THE HORSE

E1

Name ______________________________

OBJECTIVE 12 **Determine height, weight, and girth.**

EQUIPMENT AND SUPPLIES

- 3 horses
- Measuring stick
- Measuring tape
- Weight tape or scales

PROCEDURE

Functional Math
- Make measurements

Job Acquisition/ Development
- Master specific job task/procedure

	Yes	No
1. Determine height of each horse by placing the stick on the ground and the cross-member on the withers.	____	____
☑ **NOTE:** Make sure the horse is standing squarely and on level ground.		
2. Determine weight by measuring with a weight tape or by placing the horse on scales.	____	____
3. Determine girth by measuring with a tape.	____	____
4. Move to other horses and follow the same procedure as in steps 1-3.	____	____

SKILL TEST RECORD

EVALUATOR'S COMMENTS

____

____

____

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See the Key below.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:

Safety procedures followed	4	3	2	1
Height measured	4	3	2	1
Weight measured	4	3	2	1
Girth measured	4	3	2	1

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the points in Product Evaluation and divide by the total number of criteria. Circle the rating on the Key.

KEY

- **4 Skilled** – Can perform job with no additional training.
- **3 Moderately Skilled** – Has performed job during training program; limited additional training may be required.
- **2 Limited Skill** – Has performed job during training program; additional training is required to develop skill.
- **1 Unskilled** – Is familiar with process, but is unable to perform job.

EVALUATOR'S COMMENTS

JOB SHEET 2	**IDENTIFICATION, SELECTION AND MARKETING OF THE HORSE** **E1**

Name ______________________________

OBJECTIVE 15 **Determine age of horse by examining teeth.**

EQUIPMENT AND SUPPLIES

- 3 horses of different ages

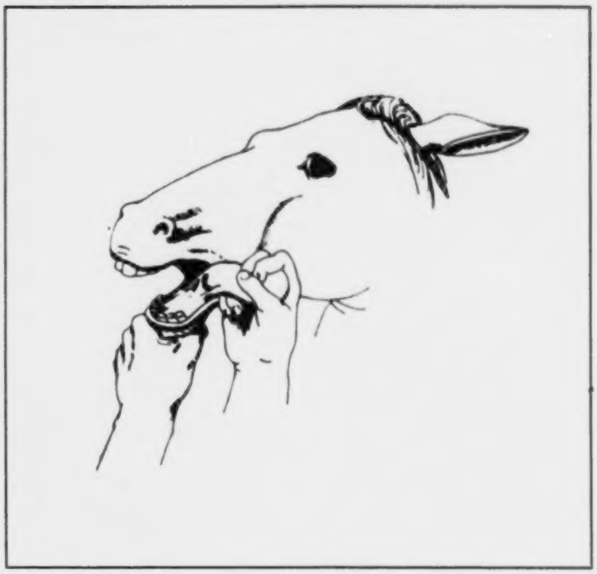
PROCEDURE

Life Science
- Investigate/apply principles of anatomy/physiology

Job Acquisition/Development
- Master specific job task/procedure

	Yes	No
1. Grasp lower jaw with left hand and tongue with right hand. (Figure 1)	___	___

FIGURE 1



	Yes	No
2. Observe teeth to determine age.	___	___
3. Move to other horses and follow same procedure as in steps 1-2.	___	___

991

SKILL TEST RECORD

EVALUATOR'S COMMENTS

____

____

____

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Key below.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:

Safety procedures followed	4	3	2	1
Age determined	4	3	2	1

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the points in Product Evaluation and divide by the total number of criteria. Circle the rating on the Key.

KEY

4 **Skilled** – Can perform job with no additional training.
3 **Moderately Skilled** – Has performed job during training program; limited additional training may be required.
2 **Limited Skill** – Has performed job during training program; additional training is required to develop skill.
1 **Unskilled** – Is familiar with process, but is unable to perform job.

EVALUATOR'S COMMENTS

____

____

____

OBJECTIVE SHEET

JUDGING

E2

INTRODUCTION

A horse's conformation affects the manner and ability of the horse to perform. A horse that more closely meets the criteria for a halter judging class will also be more likely to perform well in other areas. Likewise, a horse that does not closely meet the criteria for a halter judging class is less likely to be a top performer in other areas. For example, a Quarter Horse that has poor muscling is unlikely to be a top barrel horse. The ability to judge horses is not something limited to competition. All horse owners and caretakers should have the ability to determine a quality horse. Horses that have good conformation will have an increased usable lifetime.

PREREQUISITES

None

FOCUS ASSIGNMENTS

Reading Comprehension
- Gain factual information
- Analyze cause and effect
- Draw conclusions

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition
- Use complete sentences

FOCUS ASSIGNMENTS	
PREREADING:	Read the Handout *Form Follows Function*. As you read, pay special attention to why individuals need to be able to judge horses.
WRITING:	Write a short (one paragraph) discussion on why individuals need to be able to judge horses. Include a brief discussion of examples where you might need to be able to judge horses.

UNIT OBJECTIVE

After completing this unit, you will show the following competencies by mastering the activities on the Assignment Sheets and by scoring at least 85% on the Written Test.

SPECIFIC OBJECTIVES

1. Describe factors to consider in judging halter classes.
2. Complete a chart on desirable and undesirable characteristics of horses' anatomy.
3. Explain the system of examination and characteristics for judging.
4. Select from a list common unsoundnesses of feet and legs.
5. Match structural defects which commonly cause unsoundness to their descriptions.
6. Complete a chart on evaluation of unsoundness and defects.
7. List important factors to consider in taking notes for oral reasons.
8. List important items to consider when organizing reasons for presentation.
9. Discuss techniques for delivering reasons.
10. Judge a halter class. (Assignment Sheet 1)
11. Prepare oral reasons. (Assignment Sheet 2)
12. Present oral reasons. (Assignment Sheet 3)

INFORMATION SHEET | *JUDGING* | E2

OBJECTIVE 1

Required Activities/
Resources
- Video
- Discussion

Describe factors to consider in judging halter classes.

Your instructor will show the video *Judging Halter Horses.*

Start the discussion by asking the question "What are the factors to consider in judging halter classes?"

☑ **NOTE:** Watch the video for factors to consider in judging halter classes. After the video your instructor will lead a class discussion on factors to consider. During this discussion write the factors in the blanks provided.

WORDS YOU SHOULD KNOW	
angulation	the amount of angle
blemish	a mark or deformity on a horse that is unattractive but does not affect the usefulness of the horse (for example, a scar)
conformation	structure and arrangement of parts as they form the body of the horse
unsoundness	a deformity or abnormality that affects the usefulness of the horse

1. ____

____

____

____

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2. ____

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3. ____

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4. ____

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____

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5. ____

____

____

____

____

6. ____

____

____

____

____

OBJECTIVE 2

Complete a chart on desirable and undesirable characteristics of horses' anatomy.

Optional Activities/
Resources in
Instructor' Guide

Anatomy and Structure	**Desirable Characteristics**	**Undesirable Characteristics**
Head	Size of head in proportion to size of body; good breed type and attractiveness	Long, narrow, Roman-nosed
Ears	Medium sized; erect, clean cut, set well apart	Flop-eared; motionless; set too high or too low
Eyes	Big, full, prominent with a dark rich hazel color; set on corners of head	Pig-eyed; glass-eyed
Nostrils	Large with skin clear; mucous membranes rosy-colored at rest and deep red with clear liquid discharge following exercise	Small
Mouth	Teeth meet evenly	Parrot-mouthed; undershot
Neck	Rather long and trim with trim throatlatch	Short, bulky, and thick; ewe-necked
Withers	Prominent	Too rounded; mutton-withered
Back	Straight with proportionate length	Sagging or swaybacked; convex or roached back
Loin	Short, heavy muscling	Weak muscling
Croup	Uniform width with hips and turned to allow rear legs to be in proper position	Too steep; too level
Chest	Proportionate width to house heart and lungs	Too narrow; too wide
Shoulder	Long and sloping	Short, straight, and steep
Forearm	Long	Short

Anatomy and Structure	**Desirable Characteristics**	**Undesirable Characteristics**
Knee	Wide, thick, deep, and clean cut	Calf-kneed, buck-kneed, bench-kneed, open-kneed
Hock	Lean, wide, and deep in it proportion; well open as viewed from the side and properly directed as viewed from rear	Cow-hocked; open in hocks; rotating hocks; sickle-hocked
Cannon	Flat with substance; short in comparison to forearm	Round and lacking substance; too long in comparison to forearm
Fetlock	Clean-cut	Thick, coarse, round
Pastern	Springy; length in correlation with well-sloped shoulder	Too straight, coon-footed
Feet	Large enough to support body; front usually larger than hind	Too small; too large

OBJECTIVE 3

Explain the system of examination and characteristics for judging.

Optional Activities/
Resources in
Instructor's Guide

☑ **NOTE:** Your primary goal should be to find the animal in the class that conforms most closely to the ideal type. Look for the six factors discussed in Objective 1. Observe from a distance of 25-30 feet for first impression, then observe all four sides closely.

VIEWING FROM THE SIDE

- Stature and scale
- Length
- Depth of heart girth and flank
- Carriage and shape of head and neck
- Shortness of back and coupling
- Levelness of top line
- Length and straightness of underline
- Height and shape of withers
- Length and slope of shoulder
- Position and conformation of knees
- Turn of croup
- Set of tail

VIEWING FROM THE FRONT

- Muscling
- Temperament and disposition
- Features of the head
- Width and depth of chest
- Position and conformation of forelegs and feet

VIEWING FROM THE REAR

- Width and roundness of hips
- Fullness of thigh and quarters
- Position and conformation of hind legs

VIEWING THE HORSE WHILE TRAVELING

- Length of stride
- Directness
- Promptness
- Height
- Spring
- Regularity
- Straightness of movement of feet and legs

VIEWING AT CLOSE INSPECTION

- Unsoundness
- Muscling
- Quality of feet and legs
- Withers

OBJECTIVE 4

Optional Activities/
Resources in
Instructor's Guide

Select from a list common unsoundnesses of feet and legs.

- Bowed tendon
- Bone spavin
- Laminitis
- Ringbone

- Sidebone
- Splint
- Capped hocks, knees, elbows
- Corns
- Navicular disease
- Stifled
- Osselets

OBJECTIVE 5

Match structural defects which commonly cause unsoundness to their descriptions.

Optional Activities/ Resources in Instructor's Guide

- **splay-footed** – toes turned outward
- **pigeon-toed** – toes turned inward
- **calf-kneed** – when viewed from the side, knees bend backward
- **buck-kneed** – when viewed from the side, knees are bent forward
- **knock-kneed or bow-kneed** – legs stand in at knees or too close at knees
- **sickle-hocked** – when viewed from the side, hind legs extend too far under the horse with too much bend at the hocks
- **bench-kneed** – when viewed from the front, cannons fail to meet center of knees
- **cow-hocked** – when viewed from the rear, toes turn out and hocks turn inward

OBJECTIVE 6

Optional Activities/
Resources in
Instructor's Guide

Complete a chart on evaluation of unsoundness and defects.

Unsoundness or Defect	Disqualification	Discrimination	Serious Discrimination
Blindness	X		
Bone spavin	X		
Capped hock		X	
Filled hocks		X	
Bog spavin			X
Cocked ankles			X
Hip down	X		
Undershot mouth			X
Parrot mouth			X
Stifled	X		
Bowed tendon			X
Cracked feet		X	
Broken wind	X		
Curb		X	
Stringhalt	X		

☑ **NOTE:** There are degrees of defects and the seriousness of a defect must be taken into account when judging.

OBJECTIVE 7

Required Activities/
Resources
– Transparency Master 1

List important factors to consider in taking notes for oral reasons.

- Make notes identifying each horse in the class.
- Develop a chart with placing, reasons, grants, and faults. (Figure 1)

OBJECTIVE 8

Required Activities/
Resources
– Transparency Master 2

List important items to consider when organizing reasons for presentation.

- Make reasons easily understood by the official judge.
- Compare horses rather than describing them.
- Arrange class into three pairs: top, middle, and bottom
- Stress strong points of the top horse in each pair and then admit or grant any way that the bottom horse in each pair may excel; repeat the same order for the second and third pair.
- Start your reasons by saying, "I placed this class of (age), (breed), (sex)" and then give placings.

  EXAMPLE: "I placed this class of three-year-old quarter horse geldings 3, 1, 2, 4."
- Describe horses in logical sequence.

  EXAMPLE: Front to rear of animal or top to bottom of animal.
- Conclude by saying, "For these reasons, I placed this class of (age), (breed), (sex)" and then your placings.

  EXAMPLE: "For these reasons, I placed this class of three-year-old quarter horse geldings 3, 1, 2, 4."

☑ **NOTE:** See Figure 2 for an example organizing reasons.

FIGURE 1

Sample Notes for Oral Reasons

NAME Jane Smith
CLASS JUDGED Quarter Horse Mares

Observations

Horse No.	General Appearances	Action
1	Grey, typey head, long coupling. Coarse angles.	Sluggish.
2	Bay with star. Good shoulder. Straight legs. Deep in heart girth.	Short stride.
3	Bay, no markings. Balanced. Deep in heart girth. Refined and feminine.	Free moving. Correct hock action.
4	Chestnut. Weak back and coarse.	Short stride. Paddles in front.

FIGURE 2

Organizing Reasons for Presentation

REASONS FOR PLACING	ADMIT OR GRANT	FAULTS
3/1 Balance, deeper in heart girth, stylish front, sharper withers, leveler croup, cleaner in hocks, truer stride	1/3 None	1/ Lacks style and quality, long coupling, coarse ankles
1/2 Shorter, broader head, longer neck, deeper in heart, more muscle in stifle, correct on front legs, rugged bone	2/1 Shorter back	2/ Buck-kneed, lacks ruggedness
2/4 Broader head, sharper withers, stronger back and loin, level croup, flatter bone, cleaner ankles	4/2 Moves closer at hocks	4/ Flat withers, coarse bone, weak back

OBJECTIVE 9

Optional Activities/
Resources in
Instructor's Guide

Discuss techniques for delivering reasons.

- Two minutes are allowed for giving out oral reasons.
- Notes will not be used while giving reasons, but placing card may.
- Voice should be clear and reasons concise, using correct terminology.
- Stance should be square and on both feet.
- Eye contact should be directed toward the person listening to reasons.
- Delivery of reasons should be in a convincing, truthful, and easily understood manner.
- Emphasis should be placed on major differences between horses, stressing the comparisons in which the top animal in each pair is superior.
- Upon conclusion, thank the individual for listening to reasons and leave.

ASSIGNMENT SHEET 1 — JUDGING — E2

Name ______________________________ Score __________

OBJECTIVE 10

Judge a halter class.

Your instructor will show the video *Judging Halter Horses.*

EQUIPMENT AND SUPPLIES

- Video *Judging Halter Horses*
- Videotape player

INSTRUCTIONS

Research and Reference
- Use audiovisual media

Cognitive Activities
- Analyze/synthesize information
- Evaluate alternatives
- Select an alternative

Judge the halter class of aged geldings shown in the video. Carefully watch the video and use the six factors discussed in Objective 1 to judge the geldings.

On the following pages is a chart of favorable comparisons and criticisms for judging halter classes. Use these terms in your assignment sheets on judging.

☑ **NOTE:** You will use your information on judging the class of aged geldings to complete Assignment Sheet 2, Prepare Oral Reasons, and Assignment Sheet 3, Present Oral Reasons.

FAVORABLE COMPARISONS	CRITICISMS
General	
Typier (more breed type)	Off type
Smoother	Rough
Higher quality	Coarse; low quality
More nicely balanced	Poorly balanced
More stylish	Plain
Heavier muscled	Light-muscled
Longer, cleaner muscling	Short, bunchy muscling
Head and neck	
Shorter, broader head	Long, narrow head
More alert eye	Sleepy-eyed
Neater muzzle	Coarse muzzle
More massive jaw	Small jaw
Shorter ear	Long, mule ear
Cleaner at the throatlatch	Coarse throated
Smoother-necked	Coarse, thick neck
Neck blends smoothly at the shoulder	Rough at shoulder
More breed character	Plain head
Longer neck	Short neck
More desirable set to neck	Low headed, high headed

FAVORABLE COMPARISONS	CRITICISMS
Shoulder	
More prominent withers	Low flat withers
Cleaner withers	Muttony (fat) withers
More angle in the shoulder	Steep shoulder
Deeper shoulder (longer)	Shallow shoulder (shorter)
More sloping shoulder	Steep shoulder
Smoother shoulder	Rough shoulder
Chest and Forelegs	
Deeper chest	Shallow chest
Broader chest	Narrow chest
Wider set forelegs	Narrow set forelegs
Heavier forearm	Light forearm
Longer tapering forearm muscle	Short, bunchy forearm muscle
Smoother knee joint	Coarse jointed
Deeper jointed	Shallow jointed
Shorter cannon	Long cannon
More medium length pastern	Long, weak; short, stiff pastern
More correct set of pastern	Weak pastern; steep pastern

FAVORABLE COMPARISONS	CRITICISMS
Barrel and Topline	
Deeper in the heart	Shallow in the heart
More spring in forerib	Flat-ribbed; flat-sided
Shorter back	Long back
Shorter, stronger coupling	Long, weak coupling
Closer-coupled	Slack-coupled
Stronger back	Weak back
Smoother hip	Rough hips; boxy hips
Longer underline	Short underline
Quarter and Rear Legs	
Heavy-quartered	Light-quartered
Longer croup	Short croup
Nicer turned croup	Steep croup; flat croup
From the side:	
Wider stifle	Narrow stifle
Wider gaskin	Light gaskin
Deeper hock	Shallow hock
From the rear:	
Thicker, fuller quarter	Narrow quarter
Thicker through stifle	Light in the stifle
More gaskin inside and out	Thin gaskin
Smoother hocked	Coarse, rough hocks

FAVORABLE COMPARISONS	CRITICISMS
Bone, Feet and Legs, Stance	
Heavier bone; stronger bone	Light bone
Flatter, cleaner cannons	Round cannons
Shorter cannons	Long cannons
More correct pasterns	Weak pasterns, steep pasterns
Cleaner joints	Fleshy joints; puffy joints
Roomier, well-rounded feet	Mule-footed
Deeper, more open heel	Shallow heel; narrow heel
Smoother, harder hooves	Thin, cracked hooves
Straighter legs	Crooked legs
Front legs	
Straighter on front legs, stands more correctly on the forelegs	Knock-kneed; bow-legged; buck-kneed; calf-kneed
Straighter on feet	Pigeon-toed; splay-footed
Hind legs	
More correct on hind legs	Cow-hocked; bow-legged; bandy-legged
Straighter feet	Toes out; toes in
More correct set at the hock	Sickle-hocked (too much angle); post-legged (not enough angle)

FAVORABLE COMPARISONS	CRITICISMS
Action	
Truer action	Faulty action
Moves straighter in front	Paddles (wings out); moves close (rope walks)
Moves straighter behind	Wings out; wings in
More correct hock action	Rolls the hocks (lateral movement); jerks at the hocks
Freer moving	Stumbles; interferes; forges (hitting front foot with back)
Snappier stride	Sluggish
Longer stride	Short stride
More forceful stride	Halting stride
More correct flexion (hocks, knees, ankles)	Stiff (hock, knee, ankle); too much flexion (lifts feet too high)

ASSIGNMENT SHEET 2

JUDGING

E2

Name ______________________________ Score __________

OBJECTIVE 11 **Prepare oral reasons.**

INSTRUCTIONS

Using the class of aged geldings shown in the video, make notes identifying each horse shown. Write your placings, reasons, grants, and faults in the appropriate boxes in the form on the following page.

Research and Reference
- Use audiovisual media

Functional Writing
- Complete forms and records

NAME:

CLASS JUDGED:

	OBSERVATIONS	
Horse Number	**General Appearance**	**Action**

ASSIGNMENT SHEET 3 JUDGING E2

Name ______________________________ Score __________

OBJECTIVE 12 **Present oral reasons.**

INSTRUCTIONS Using your notes from Assignment Sheet 2, organize your reasons for presentation using the charts on the following pages. An example is given on the following page. After you have organized your reasons, present them to your instructor.

Research and Reference
- Use audiovisual media

Functional Writing
- Complete forms and records

Oral Presentation
- Make persuasive presentations
- Use good speaking techniques

Example for halter class: 2 - 3 - 1 - 4

REASONS FOR PLACING	ADMIT OR GRANT	FAULTS
2/3 Balance, more substance, shorter coupled, shorter backed, turn of croup	2/3 Cleaner cut about the head and neck	3/ Stands close behind
3/1 More slope of shoulder and definition of withers, stands more correctly from front and side, goes with longer and springier strides	1/3 None	1/ Weak in loin, lacks quality
1/4 More stylish in front, sharper at withers, stands more correctly in front, easier and freer stride	4/1 Flatter bone	4/ Lacks type and quality, wings

SAMPLE SET OF ORAL REASONS FOR A HALTER CLASS

I placed this set of three-year-old quarter horse geldings 2 - 3 - 1 - 4.

Referring to my top pair 2 and 3, I place 2 over 3 because he is more balanced in conformation and possesses more substance. He is shorter coupled, shorter backed, and more nicely turned over the croup. I will grant that 3 is cleaner cut about the head and throat. I fault 3 for standing close behind.

Regarding my middle pair 3 and 1, I place 3 over 1 because he has more slope of shoulder, definition at the withers, and is stronger in the stifle. He also stands more correctly on his feet and legs as viewed from the front and side and goes with a longer and springier stride. I fault 1 for being weak in the loin and lacking the quality of the 3 gelding.

In the case of my bottom pair, I placed 1 over 4 because he is more stylish about the front and sharper at the withers. He stands more correctly in the front and has an easier and freer stride. I grant that 4 has flatter bone but fault him for lacking type and quality and winging slightly at the trot.

For these reasons I placed this class of three-year-old quarter horse geldings 2 - 3 - 1 - 4. Thank you.

REASONS FOR PLACING	ADMIT OR GRANT	FAULTS

OBJECTIVE SHEET

TRANSPORTING THE HORSE

F1

INTRODUCTION

There are many instances when horses need to be transported – traveling to horse shows, races, rodeos, sales, veterinary care, or for breeding. Safety must always be considered when transporting horses. Many accidents happen when loading and transporting horses, causing injury to both horses and people. Ensuring that vehicles and equipment are working properly, preparing the horse for travel, and safely loading the horse will help prevent accidents or injuries.

PREREQUISITES

Equine Management and Production, Unit A2 "Safety."

FOCUS ASSIGNMENTS

Reading Comprehension
- Gain factual information
- Analyze cause and effect
- Draw conclusions

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition
- Use complete sentences

FOCUS ASSIGNMENTS	
PREREADING:	Read the Handout *I Knew Not To Do That.* When reading the handout pay special attention to what you believe the individuals are doing incorrectly.
WRITING:	Write a short (one paragraph to one page) summary of what the individuals did incorrectly and how they might correct their mistakes.

UNIT OBJECTIVE

After completing this unit, you will show the following competencies by mastering the activities on the Job Sheets and by scoring at least 85% on the Written Test.

SPECIFIC OBJECTIVES

1. List ways to transport the horse.
2. Select from a list precautions to take before transporting the horse.
3. List items of trailer maintenance.
4. Discuss factors to consider while driving and transporting the horse.
5. Select from a list equipment needed for hauling.
6. List health requirements necessary for interstate travel.
7. Wrap a horse's legs. (Job Sheet 1)
8. Wrap a horse's tail. (Job Sheet 2)
9. Load a horse. (Job Sheet 3)

INFORMATION SHEET

TRANSPORTING THE HORSE

F1

OBJECTIVE 1

Optional Activities/
Resources in
Instructor's Guide

List ways to transport the horse.

WORDS YOU SHOULD KNOW	
trailer	implement pulled by truck or car which is used to haul horses; horse trailers are usually the bumper-hitch type or gooseneck type
van	implement that is larger than a trailer and is pulled by a large truck or located on the bed of a truck

- Trailer
- Van
- Train
- Ship
- Plane

OBJECTIVE 2

Optional Activities/
Resources in
Instructor's Guide

Select from a list precautions to take before transporting the horse.

WORDS YOU SHOULD KNOW	
statement of ownership	bill of sale or registration papers

- Provide good footing.
- Provide proper ventilation.

- Prepare the horse by wrapping its legs and tail.

  ☑ **NOTE:** The horse's legs should be wrapped from hoof to knee.

- Blanket the horse if the weather requires.
- Feed the horse lightly and give fresh, clean water to drink.
- Possess the proper health papers and statement of ownership.
- Control flies and other insects.

OBJECTIVE 3

Optional Activities/
Resources in
Instructor's Guide

List items of trailer maintenance.

- Check the tires.

  ☑ **NOTE:** Tires should have 40-45 lbs of air, wide profile, four ply or heavier, and 1/16" tread or more.

- Check the floor boards before loading.
- Check the brake lights, turn signals, and running lights.
- Check the spare tire.
- Make sure the hitch and latches are secured.
- Oil the hitch mechanism regularly.
- Pack the wheel bearings annually or every 10,000 miles.
- Keep the trailer washed and waxed to prevent rust.

OBJECTIVE 4

Optional Activities/
Resources in
Instructor's Guide

Discuss factors to consider while driving and transporting the horse.

- Drive at a moderate, constant, and safe speed.
- Avoid quick starts and stops.
- Use light application of brakes; consider the stopping distance.

- Avoid taking sharp curves too fast.
- Take into consideration state laws, signs, amount and speed of traffic, and weather conditions.

OBJECTIVE 5

Optional Activities/ Resources in Instructor's Guide

Select from a list equipment needed for hauling.

- Trailer and vehicle
- Halter with lead
- Leg and tail wraps

  ☑ **NOTE:** Shipping boots may be used instead of leg wraps.

- Blanket or sheet

  ☑ **NOTE:** This may or may not be necessary, depending on the weather.

OBJECTIVE 6

Optional Activities/ Resources in Instructor's Guide

List health requirements necessary for interstate travel.

WORDS YOU SHOULD KNOW	
Coggins exam	test for equine infectious anemia; issued by a veterinarian
Certificate of Veterinary Inspection	issued by a veterinarian stating health conditions of the animal

- Negative Coggins test

  ☑ **NOTE:** Time of validity varies among states and purpose for transporting.

- Certificate of Veterinary Inspection (CVI)

  ☑ **NOTE:** Each state establishes its own regulations for animals entering its borders. For specific requirements of a state check with the state veterinarian.

JOB SHEET 1

TRANSPORTING THE HORSE

F1

Name ______________________________

OBJECTIVE 7

Wrap a horse's legs.

EQUIPMENT AND SUPPLIES

- Horse
- Cotton or quilted padding
- Track or leg bandages

⚠ WARNING: INJURY TO BOTH HORSES AND HUMANS POSSIBLE. Use caution when applying bandages.

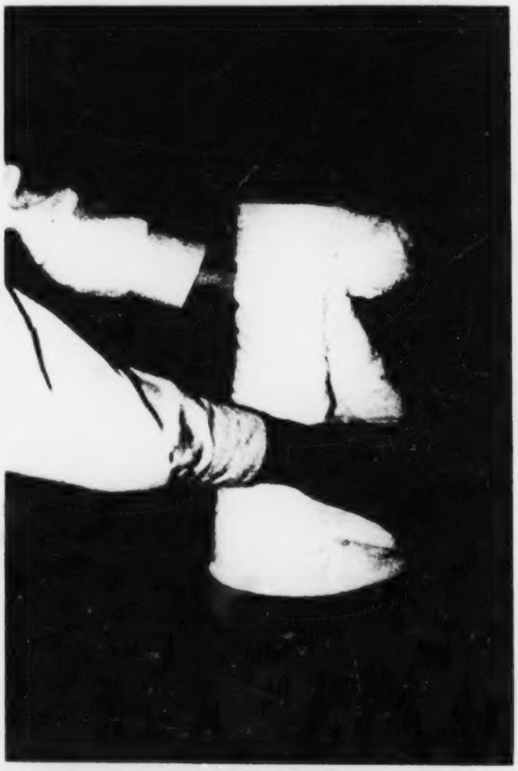
PROCEDURE

Cognitive Activities
- Transfer knowledge/training to new situations

Job Acquisition/ Development
- Master specific job task/procedure

	Yes	No
1. Apply padding to the leg. (Figure 1)	____	____

FIGURE 1



	Yes	No
2. Smooth end of padding carefully for final wrapping.	____	____
3. Secure the end of the bandage with a final turn of padding. (Figure 2)	____	____

FIGURE 2

1026

	Yes	No
4. Continue making successive turns of the final wrap, spiralling downward. (Figure 3)	____	____

FIGURE 3

Yes No

5. Wrap all the way to the top and back to the center, unrolling final turn for application without tension. (Figure 4) ____ ____

FIGURE 4

	Yes	No
6. Press the final wrap so that it adheres to itself on the outside of the leg. (Figure 5)	____	____

FIGURE 5

☑ **NOTE:** The above photo shows vet wrap being used to help secure the bandage.

SKILL TEST RECORD

EVALUATOR'S COMMENTS

____

____

____

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive rating of "3" or higher to demonstrate student mastery. (See Key below.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:

Safety observed	4	3	2	1
Length of wrap	4	3	2	1
Tension	4	3	2	1
Wrapped correctly	4	3	2	1

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the points in Product Evaluation and divide by the total number of criteria. Circle the rating on the Key.

KEY

4 **Skilled** – Can perform job with no additional training.
3 **Moderately Skilled** – Has performed job during training program; limited additional training may be required.
2 **Limited Skill** – Has performed job during training program; additional training is required to develop skill.
1 **Unskilled** – Is familiar with process, but is unable to perform job.

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EVALUATOR'S COMMENTS

1031

JOB
SHEET 2

TRANSPORTING THE HORSE

F1

Name ______________________________

OBJECTIVE 8

Wrap a horse's tail.

EQUIPMENT AND SUPPLIES

- Horse
- Tail or leg bandage

⚠ WARNING: INJURY TO BOTH HORSES AND HUMANS POSSIBLE. Use caution when applying bandages.

PROCEDURE

Cognitive Activities
- Transfer knowledge/training to new situations

Job Acquisition/ Development
- Master specific job task/procedure

	Yes	No
1. Start at the top of the tail. (Figure 1)	____	____

FIGURE 1

	Yes	No
2. Progress by spiralling downward. (Figure 2)	____	____

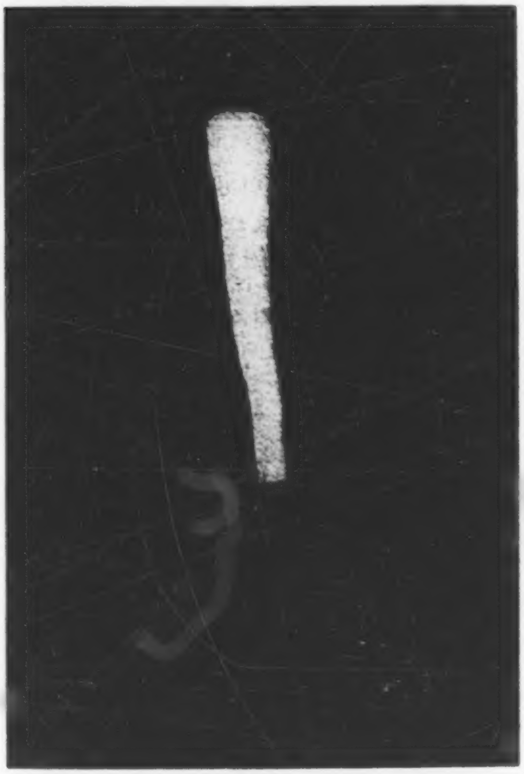
FIGURE 2

1033

Yes No

3. Wrap the upper half of the tail and back to the center of the wrap, unrolling final turn to fasten or tie on outside of tail. (Figure 3) ____ ____

FIGURE 3



SKILL TEST RECORD

EVALUATOR'S COMMENTS

____

____

____

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Key below.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:

Safety observed	4	3	2	1
Wrap length	4	3	2	1
Tension	4	3	2	1
Wrapped correctly	4	3	2	1

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the points in Product Evaluation and divide by the total number of criteria. Circle the rating on the Key.

KEY

4 **Skilled** – Can perform job with no additional training.
3 **Moderately Skilled** – Has performed job during training program; limited additional training may be required.
2 **Limited Skill** – Has performed job during training program; additional training is required to develop skill.
1 **Unskilled** – Is familiar with process, but is unable to perform job.

1035

EVALUATOR'S COMMENTS

1036

JOB SHEET 3

TRANSPORTING THE HORSE

F1

Name ____________________

OBJECTIVE 9

Load a horse.

EQUIPMENT AND SUPPLIES

- Horse or stock trailer hooked to vehicle
- Horse (preferably young, halter broken but not familiar with loading)
- Tail and leg wraps
- Lead line, 15 feet long
- Halter

⚠ **WARNING:** INJURY TO BOTH HORSES AND HUMANS POSSIBLE. Use caution when loading and unloading a horse.

PROCEDURE

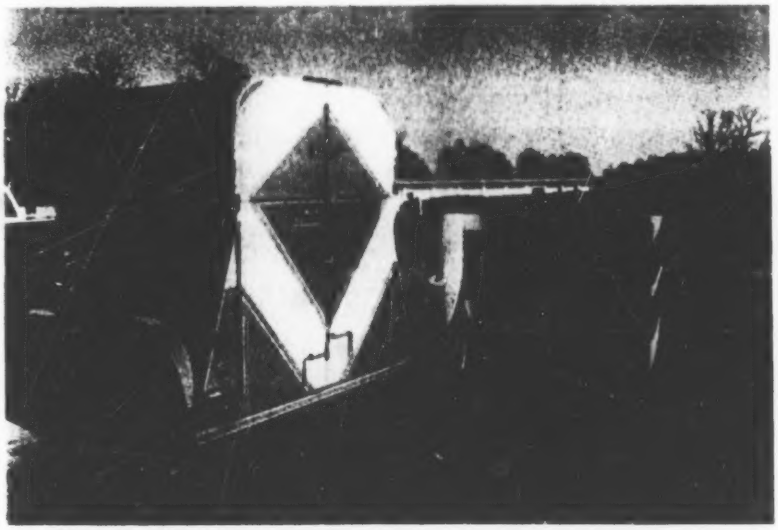
Cognitive Activities
- Transfer knowledge/training to new situations

Job Acquisition/ Development
- Master specific job task/procedure

Yes No

1. Park near a board fence or barn where the horse cannot move around to the side. (Figure 1) ____ ____

FIGURE 1



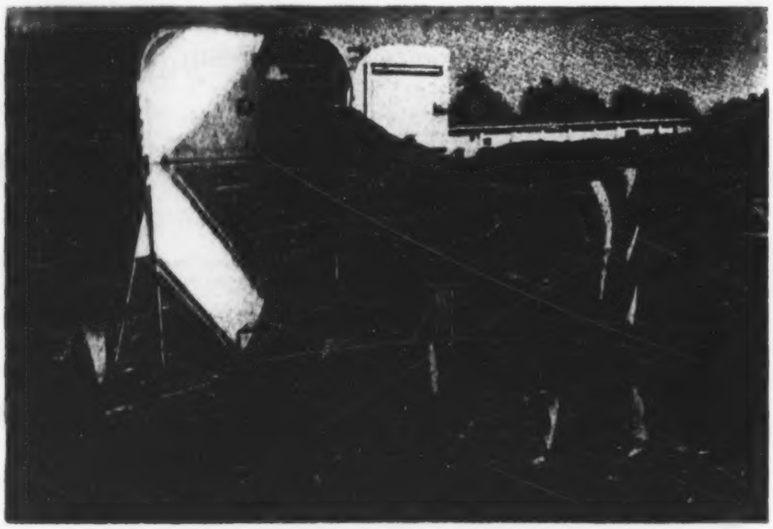
BEST COPY AVAILABLE

Yes No

2. Open the rear door and place the lead line through the loop in front of the trailer and back to you, or have someone in front of the horse holding the lead line. (Figure 2) ____ ____

☑ **NOTE:** If someone is to be in front of the horse holding the lead line, open the "escape" door on the side of the trailer.

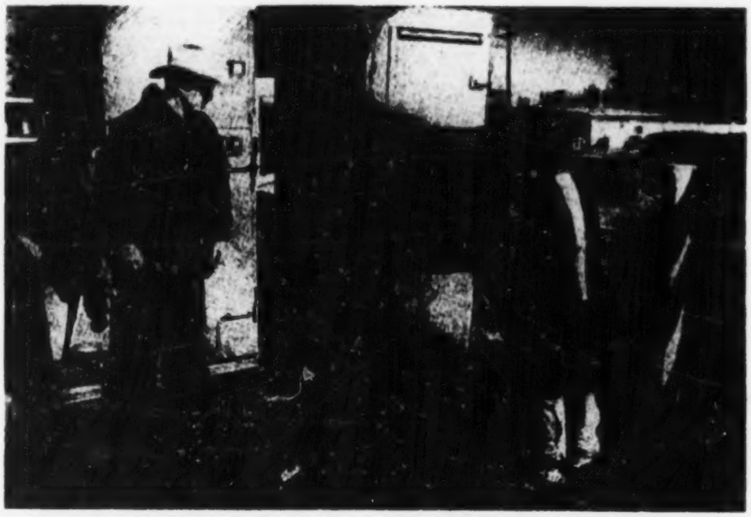
FIGURE 2



Yes No

3. Stand behind and to the side of the horse, keeping its head straight with the lead line, or have the person in front of the horse hold the lead while you stand to the side of the horse to keep it straight. Stand in a position so the horse cannot kick you. Stand on the side of the horse that is opposite the fence or barn. (Figure 3) _____ _____

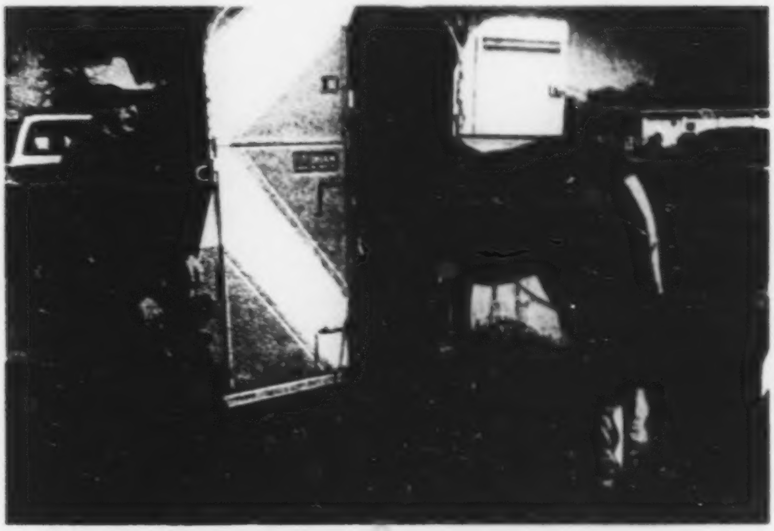
FIGURE 3



Yes No

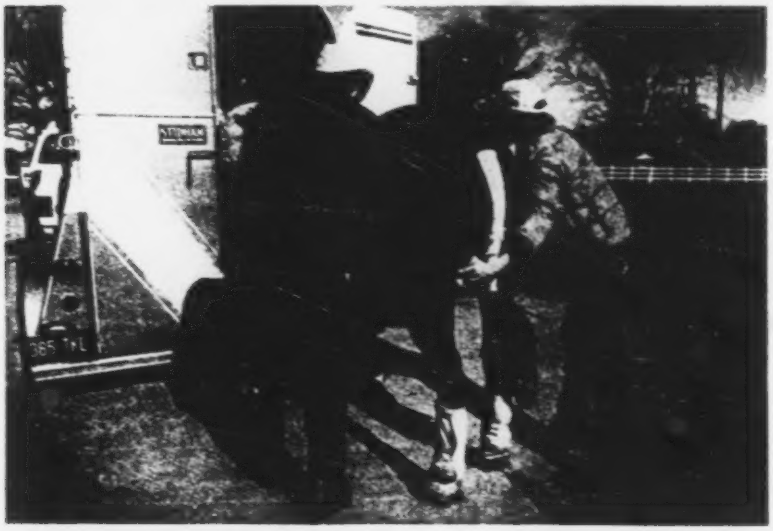
4. Apply pressure to the horse from the rear, only keeping the lead tight enough to keep the head straight. (Figures 4 and 5) ____ ____

FIGURE 4



☑ **NOTE:** If the horse shows resistance, pressure may be applied by placing a rope behind the horse.

FIGURE 5



☑ **NOTE:** Another way to apply pressure if the horse shows resistance is for two people to grasp arms behind the horse.

	Yes	No
5. Close the door and fasten the butt chain once the horse is loaded.	____	____
6. Secure the lead tight enough to keep a leg from getting over the lead, but not tight enough that the horse could break it.	____	____
7. Unload the horse by untying the head, untying the butt chain, and opening the door.	____	____
8. Allow the horse to back out slowly.	____	____

SKILL TEST RECORD

EVALUATOR'S COMMENTS

____

____

____

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Key below.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:				
Safety observed	4	3	2	1
Horse loaded	4	3	2	1
Horse unloaded	4	3	2	1

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the points in Product Evaluation and divide by the total number of criteria. Circle the rating on the Key.

KEY

- 4 **Skilled** – Can perform job with no additional training.
- 3 **Moderately Skilled** – Has performed job during training program; limited additional training may be required.
- 2 **Limited Skill** – Has performed job during training program; additional training is required to develop skill.
- 1 **Unskilled** – Is familiar with process, but is unable to perform job.

EVALUATOR'S COMMENTS

OBJECTIVE SHEET

PHYSICAL FACILITIES AND STABLE MANAGEMENT

G1

INTRODUCTION

Physical facilities are used for various reasons: to provide safety and protection for horses, to take care of sick or injured horses, for foaling, breeding, grooming and saddling, or for storing feed, tack, and equipment. The health and safety of both horses and people must always be considered when planning facilities. Many other factors must be considered as well such as the needs of the facility.

PREREQUISITES

None

FOCUS ASSIGNMENTS

Reading Comprehension
- Gain factual information
- Analyze cause and effect
- Draw conclusions

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition
- Use complete sentences

FOCUS ASSIGNMENTS

PREREADING:	Read the Handout *Different Needs, Different Facilities*. As you read pay special attention to the needs of the people and how their facilities meet those needs.
WRITING:	Write a short (one paragraph) summary of how you believe the facilities meet the specific needs of the people. Discuss the advantages and disadvantages of the facilities.

UNIT OBJECTIVE

After completing this unit, you will show the following competencies by mastering the activities on the Assignment Sheets and by scoring at least 85% on the Written Test.

SPECIFIC OBJECTIVES

1. List steps in planning a facility.
2. List factors to consider in the location of the facility.
3. List factors to consider in the design and construction of a facility.
4. Describe recommended environmental conditions for mature horses.
5. Complete a chart on recommended stall sizes.
6. Select from a list characteristics of stall construction.
7. Select from a list conditions which determine the storage space requirements for feed and bedding.
8. Select from a list types of bedding.
9. Describe sanitation requirements of horse facilities.
10. Draw plans for a horse facility. (Assignment Sheet 1)
11. List types of fences used for horses.
12. List advantages of good fences.
13. Analyze fencing requirements for horses. (Assignment Sheet 2)

INFORMATION SHEET

PHYSICAL FACILITIES AND STABLE MANAGEMENT

G1

OBJECTIVE 1

Optional Activities/ Resources in Instructor's Guide

List steps in planning a facility.

1. Identify needs and objectives of the facility.
2. Analyze and select the site.
3. Fit the operation to the site.
4. Design and construct the facility.

OBJECTIVE 2

Optional Activities/ Resources in Instructor's Guide

List factors to consider in the location of the facility.

WORDS YOU SHOULD KNOW	
topography	the land features of an area

- Topography
- Zoning
- Water availability
- Drainage
- Utilities
- Accessibility
- Expandibility

OBJECTIVE 3

Optional Activities/ Resources in Instructor's Guide

List factors to consider in the design and construction of a facility.

- Building codes
- Style/size of building

1045

- Material selection
- Lighting
- Fire protection
- Sanitary considerations and pest control

☑ **NOTE:** Manure disposal must be considered. If left unattended it will become a sanitary problem for the facility.

- Cost
- Flexibility
- Protection from extreme temperatures and weather
- Adequate stall space
- Ventilation
- Areas for grooming, exercise, pastures, and paddocks

OBJECTIVE 4

Describe recommended environmental conditions for mature horses.

Optional Activities/ Resources in Instructor's Guide

- Temperature – 45°-75° F with an optimum of 55° F

☑ **NOTE:** The comfort zone for newborn foals is 75°-80° F.

- Humidity – 50-75%
- Ventilation rates – 60 cu ft/min in the winter and 160 cu ft/min in the summer for a 1000 lb horse
- Drinking water – 40°-45° F in the winter and 60°-75° F in the summer

OBJECTIVE 5

Optional Activities/
Resources in
Instructor's Guide

Complete a chart on recommended stall sizes.

TYPE OF HORSE	STALL SIZE
Riding horses	12 X 12
Stallions	14 X 14
Weanlings	10 X 10
Yearlings	10 X 10
Foaling	16 X 16
Isolation	12 X 12

☑ **NOTE:** Portable stalls that are 12 X 12 are common. If portable stalls are used, the foaling stall would be 12 X 24.

OBJECTIVE 6

Optional Activities/
Resources in
Instructor's Guide

Select from a list characteristics of stall construction.

- Convenient and safe

  EXAMPLES: Convenient for feeding, watering, and cleaning; safe from protruding objects and conditions which might cause injury.

- Walls constructed of strong and safe materials

  EXAMPLES: Concrete, masonry, metal or 2" wood

- Partitions 7 feet high; lower 4 feet of partition solid
- Corner supports of steel or pressure-treated wood
- Proper light and ventilation
- Floor of stall of firm soil

  EXAMPLE: Clay

- Waterers, feed troughs, and hay mangers located so they will not be a safety hazard

OBJECTIVE 7

Optional Activities/ Resources in Instructor's Guide

Select from a list conditions which determine the storage space requirements for feed and bedding.

- Amount of available pasture
- Length of pasture season
- Method of feeding
- Kind of feed
- Climate
- Amount of feed raised versus amount purchased
- Number of horses to feed

OBJECTIVE 8

Optional Activities/ Resources in Instructor's Guide

Select from a list types of bedding.

☑ **NOTE:** Bedding should absorb urine, be free of dust and allergic materials, available in your location, unpalatable to the horse, and relatively inexpensive.

- Straw
- Wood shavings
- Sawdust
- Sand

    ☑ **NOTE:** Sand is not a desirable choice for bedding since it does not easily absorb urine.

- Ground cobs
- Peat moss
- Grass

    EXAMPLE: Love grass

☑ **NOTE:** Other types of bedding are used in localities where they are readily available. Examples would be rice hulls and peanut hulls.

OBJECTIVE 9

Optional Activities/
Resources in
Instructor's Guide

Describe sanitation requirements of horse facilities.

- Clean waterers and feed troughs regularly.
- Do NOT feed hay on the stall floor.
- Remove manure from stalls daily.
- Store feed in rodent-proof containers.
- Control insect population (especially fly population).
- Keep horse facility neat and clean.

  ☑ **NOTE:** A clean facility is less inviting to rodents.

OBJECTIVE 10

Complete Assignment Sheet 1.

OBJECTIVE 11

Optional Activities/
Resources in
Instructor's Guide

List types of fences used for horses.

- Steel pipe and rail

  ☑ **NOTE:** Steel pipe and rail fence has a high cost initially.

- Steel posts and steel cable
- Wooden posts and boards
- Wooden posts and poles
- Wooden posts and woven wire
- Wire

  ☑ **NOTE:** Barbed wire is a poor choice for horse fencing and should not be used because of the risk of injury to the horse. However, smooth wire and wire mesh fencing are suitable for horses.

- PVC plastic
- Electric fence

OBJECTIVE 12 **List advantages of good fences.**

Optional Activities/ Resources in Instructor's Guide

- Maintain boundaries
- Reduce losses of crops and injuries to animals
- Increase property values
- Promote good relationship between neighbors
- Protect animals from roadways
- Add to the attractiveness of the premises

OBJECTIVE 13 **Complete Assignment Sheet 2.**

1050

ASSIGNMENT SHEET 1

PHYSICAL FACILITIES AND STABLE MANAGEMENT

G1

Name ______________________________ Score __________

OBJECTIVE 10

Draw plans for a horse facility.

EQUIPMENT AND SUPPLIES

- Sample horse facility plans
- Drawing paper and pencil
- Ruler

INSTRUCTIONS

Your instructor will give you sample horse facility plans. Study the plans and determine what type of facility you would like to plan. On a separate sheet of paper, draw the plans for your facility. Write a brief (one paragraph) discussion of what your facility will be used for and why you designed the facility as you did.

Functional Reading
- Follow written instructions
- Interpret graphics and symbols

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition
- Use complete sentences
- Construct graphics and symbols

Data Analysis and Display
- Interpret plans/blueprints

ASSIGNMENT SHEET 2

PHYSICAL FACILITIES AND STABLE MANAGEMENT

G1

Name ______________________________ Score __________

OBJECTIVE 13

Analyze fencing requirements for horses.

INSTRUCTIONS

Analyze the two scenarios given below. Write a brief (one paragraph) discussion on what type of fencing the horse owner could use. Pay attention to what type of facility it is and how the fencing requirements are best met.

Reading Comprehension
- Gain factual information
- Draw conclusions

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition
- Use complete sentences

Case 1

Jane and Steve own a breeding farm and recently many of the foals sired by their stallions have started winning at races. This has prompted interest in their operation. Currently, their fences are wooden and in need of painting. They must have sturdy fences because of their stallions. They are also willing to spend more on fences than they have in the past.

Case 2

Jessie recently purchased a small farm of 40 acres. He has two horses that he has been keeping at a stable. He is excited about the opportunity to have the horses on his own land. The previous owners of the land raised cattle and had fenced the land with barbed wire. Because of the expense of purchasing the 40 acres, Jessie cannot spend a lot of money on new fencing.

OBJECTIVE SHEET

SELECTION AND CARE OF TACK AND EQUIPMENT

H1

INTRODUCTION

Horses can be used for many different reasons such as pleasure or show. No matter what a horse is used for, tack and equipment are necessary. Tack and equipment can be basic or specialized for certain events, such as a roping saddle or a racing saddle. Knowing how to care for tack is important. Tack that is properly taken care of can last for many years. Knowing the basic items of tack is important for anyone involved with horses.

PREREQUISITES

None

FOCUS ASSIGNMENTS

Reading Comprehension
- Gain factual information
- Analyze cause and effect
- Draw conclusions

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Composition
- Use complete sentences

FOCUS ASSIGNMENTS

PREREADING:	Read the Handout *Different Tack for Different Uses*. As you read pay special attention to how the different uses of horses affect the tack that is used.
WRITING:	Write a short (one paragraph) discussion on how tack varies according to the use of the horse.

UNIT OBJECTIVE

After completing this unit, you will show the following competencies by mastering the activities on the Job Sheet and by scoring at least 85% on the Written Test.

SPECIFIC OBJECTIVES

1. List basic tack and equipment.
2. Label parts of the Western bridle.
3. Label parts of the Western saddle.
4. Label parts of the English bridle.
5. Label parts of the English saddle.
6. Identify types of bits.
7. Identify artificial riding aids.
8. Describe basic care of tack and equipment.
9. Describe ways to store saddles and bridles.
10. Clean tack. (Job Sheet)

1055

INFORMATION SHEET

SELECTION AND CARE OF TACK AND EQUIPMENT

H1

OBJECTIVE 1

Optional Activities/
Resources in
Instructor's Guide

List basic tack and equipment.

TACK

- Halter
- Leads

  EXAMPLE: Stud shank lead, normal lead
- Saddle and saddle pad
- Bridle
- Grooming equipment
- Blankets

EQUIPMENT

- Water buckets or automatic waterers
- Wheelbarrow or muck bucket
- Shovel
- Manure fork
- Bedding
- Hay and grain feeder
- Hose
- Rake
- First aid kit

OBJECTIVE 2

Optional Activities/
Resources in
Instructor's Guide

Label parts of the Western bridle.

PARTS OF THE WESTERN BRIDLE (Figure 1 standard western bridle and Figure 2 western headstall)

FIGURE 1

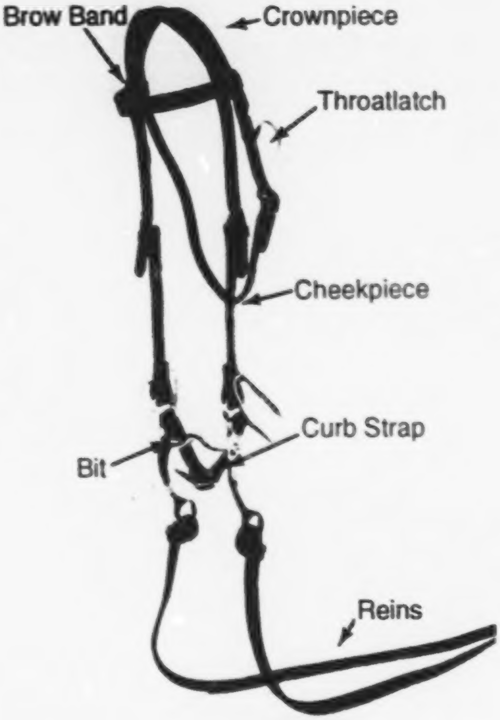
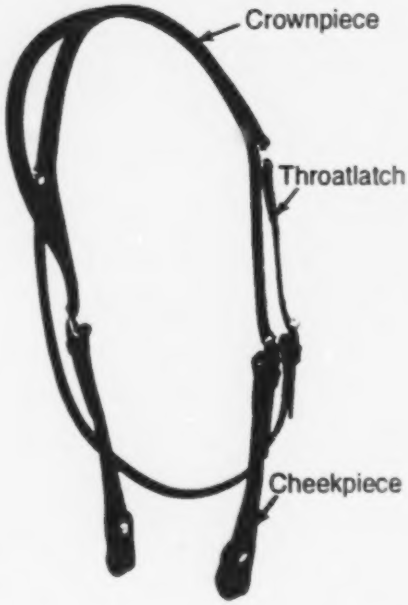

Brow Band
Crownpiece
Throatlatch
Cheekpiece
Curb Strap
Bit
Reins

FIGURE 2


Crownpiece
Throatlatch
Cheekpiece

OBJECTIVE 3

Optional Activities/
Resources in
Instructor's Guide

Label parts of the Western saddle.

PARTS OF THE WESTERN SADDLE (Figure 3 parts of the western

☑ **NOTE:** Figure 3 shows the parts of the western saddle and Figure 4 shows a western saddle on a horse.

FIGURE 3

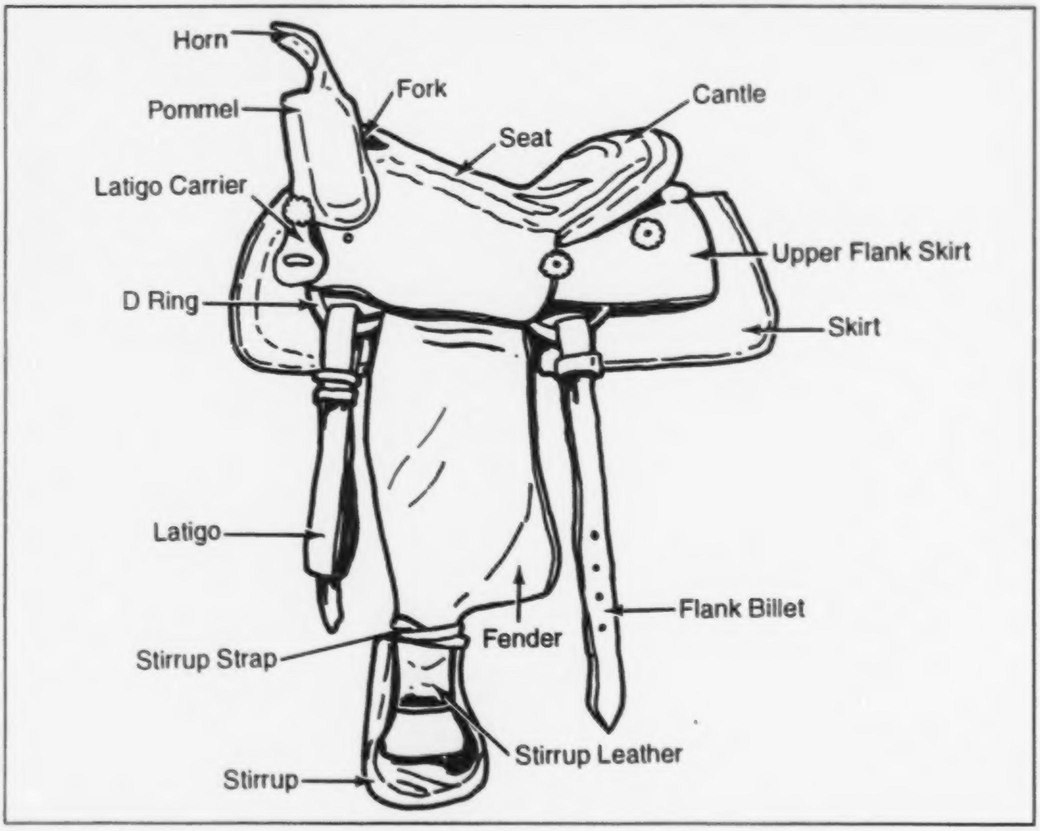

Horn
Pommel
Fork
Seat
Cantle
Latigo Carrier
Upper Flank Skirt
D Ring
Skirt
Latigo
Flank Billet
Fender
Stirrup Strap
Stirrup Leather
Stirrup

FIGURE 4

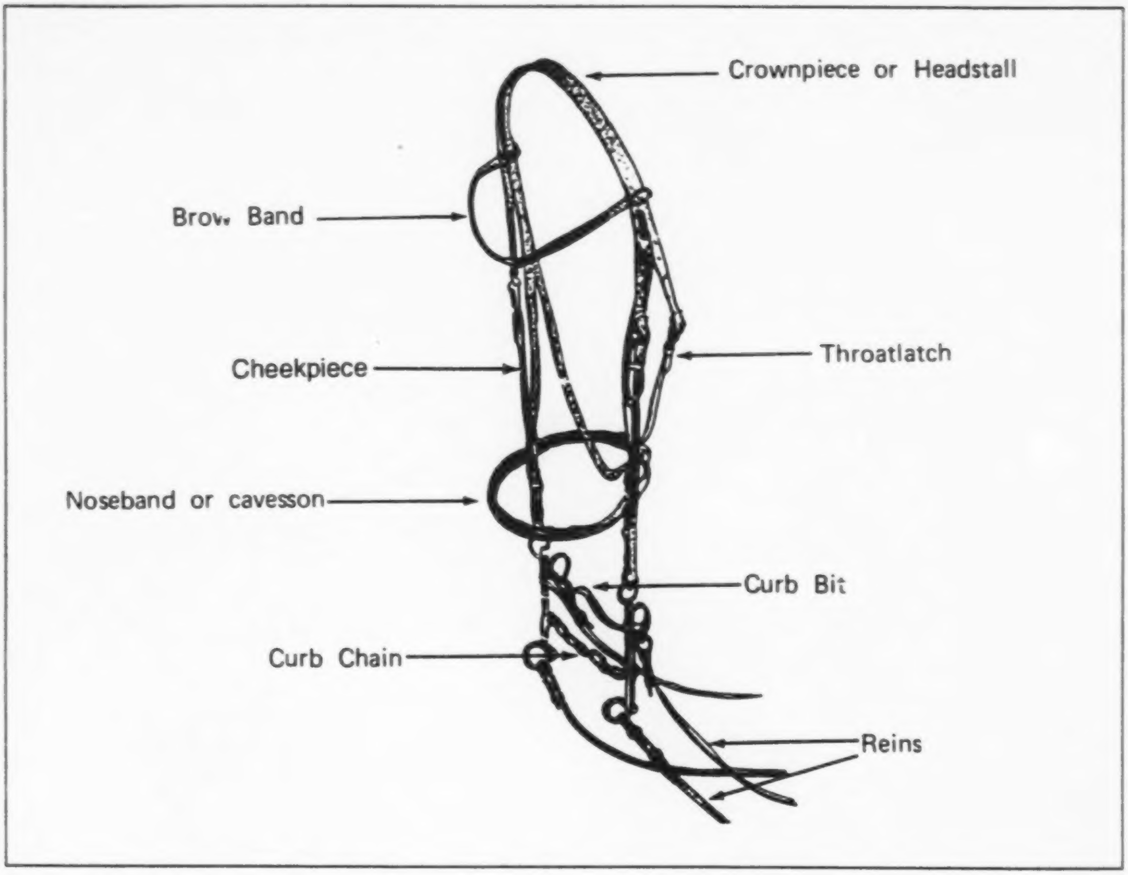
OBJECTIVE 4

Optional Activities/
Resources in
Instructor's Guide

Label parts of the English bridle.

PARTS OF THE ENGLISH BRIDLE (Figure 5)

FIGURE 5


Crownpiece or Headstall
Brow Band
Throatlatch
Cheekpiece
Noseband or cavesson
Curb Bit
Curb Chain
Reins

OBJECTIVE 5

Optional Activities/
Resources in
Instructor's Guide

Label parts of the English saddle.

PARTS OF THE ENGLISH SADDLE (Figure 6)

☑ **NOTE:** Figure 6 shows the parts of the English saddle and Figure 7 shows an english saddle on a horse.

FIGURE 6

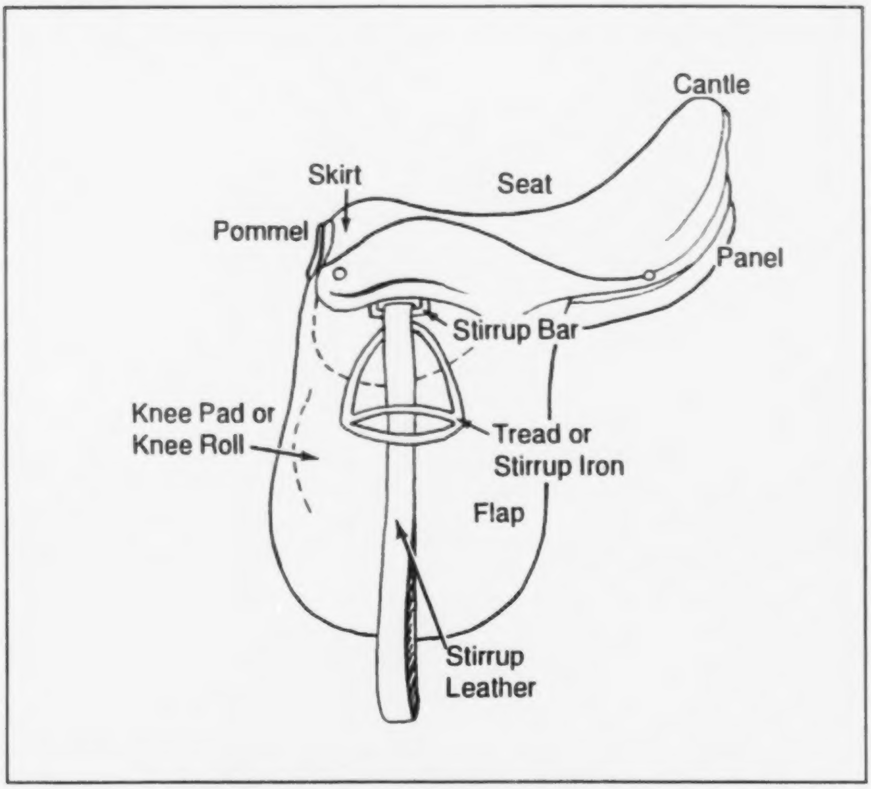

Cantle
Skirt
Seat
Pommel
Panel
Stirrup Bar
Knee Pad or Knee Roll
Tread or Stirrup Iron
Flap
Stirrup Leather

FIGURE 7

OBJECTIVE 6

Optional Activities/
Resources in
Instructor's Guide

Label types of bits.

Snaffle Bit (Figure 8)

FIGURE 8

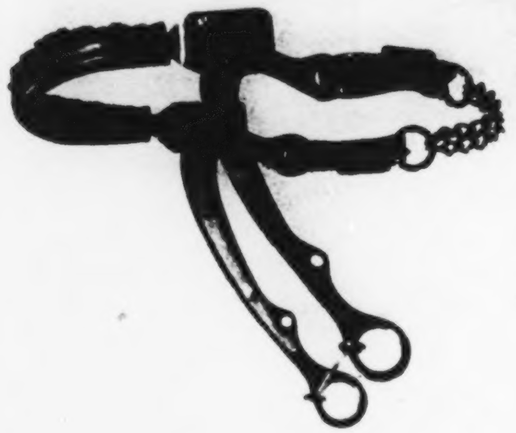
Curb bit (Figure 9)

FIGURE 9

☑ **NOTE:** Curb bits are commonly used on adult Western horses.

HACKAMORE (Figure 10)

FIGURE 10



☑ **NOTE:** The hackamore has no mouthpiece. Mechanical hackamores are used on horses that need a different form of control or that have mouth injuries.

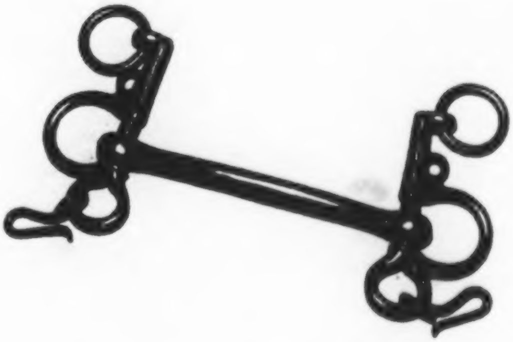
BOSAL (Figure 11)

FIGURE 11

COMBINATION BITS

PELHAM BIT (Figure 12)

FIGURE 12



KIMBERWICKE (Figure 13)

FIGURE 13

☑ **NOTE:** Combination bits are variations of snaffle and curb bits. The pelham bit and kimberwicke bit are commonly used on English horses.

OBJECTIVE 7

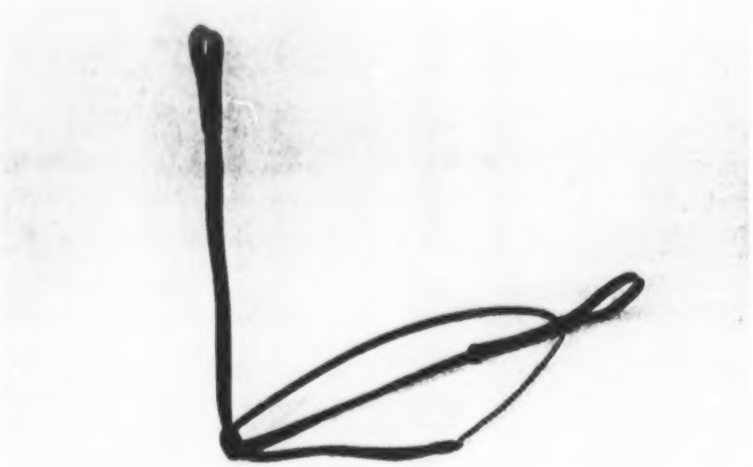
Optional Activities/ Resources in Instructor's Guide

Label artificial riding aids.

☑ **NOTE:** Artificial riding aids help the rider communicate cues to the horse. Artificial riding aids should supplement natural riding aids such as voice and pressure.

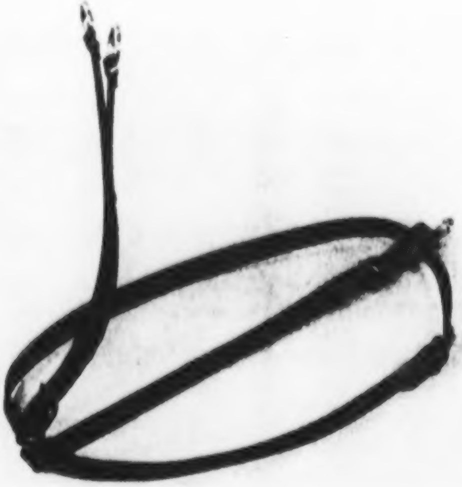
STANDING MARTINGALE (Figure 14)

FIGURE 14



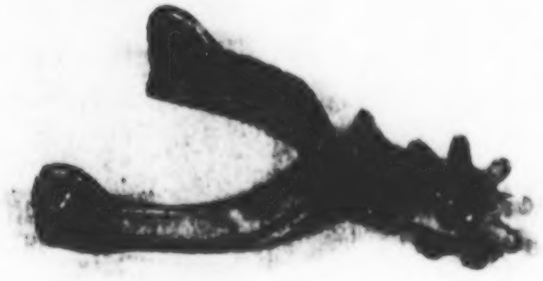
RUNNING MARTINGALE (Figure 15)

FIGURE 15



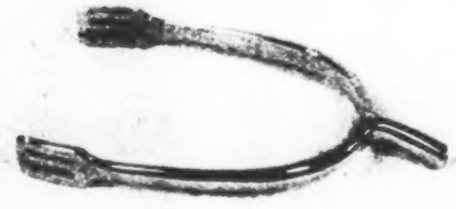
WESTERN SPUR (Figure 16)

FIGURE 16



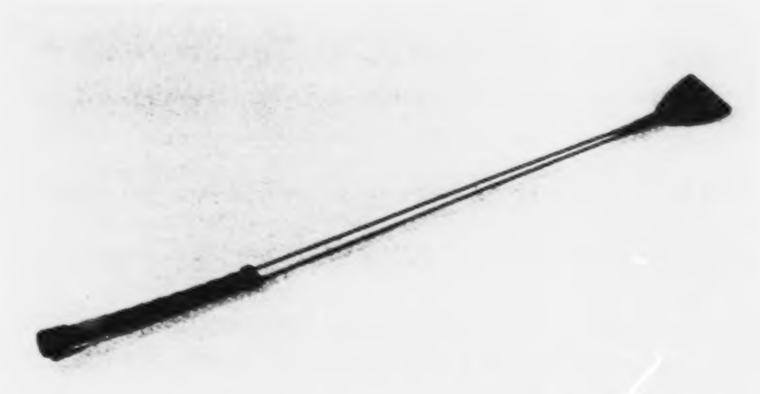
ENGLISH SPUR (Figure 17)

FIGURE 17



RIDING CROP (Figure 18)

FIGURE 18



OBJECTIVE 8

Describe basic care of tack and equipment.

TACK

- Wipe tack with a damp cloth after each use.
- Remove any horse sweat from the tack.
- Use saddle soap and preservative on leather.
- Thoroughly clean the saddle at least once a year, twice a year if heavily used.
- Do NOT let tack drag on the ground when carrying it.
- Do NOT leave tack on the ground.
- Check tack before use and replace worn items quickly.

EQUIPMENT

- Store equipment items properly.
- Repair or replace broken equipment quickly.
- Use equipment only for its intended use.

OBJECTIVE 9 **Describe ways to store saddles and bridles.**

WESTERN SADDLES

- Hang with a rope by running the rope through from the back of the swells and loop it over the horn from the front. (Figure 19)

FIGURE 19

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- Place the saddle on a saddle rack. (Figures 20 and 21)

FIGURE 20

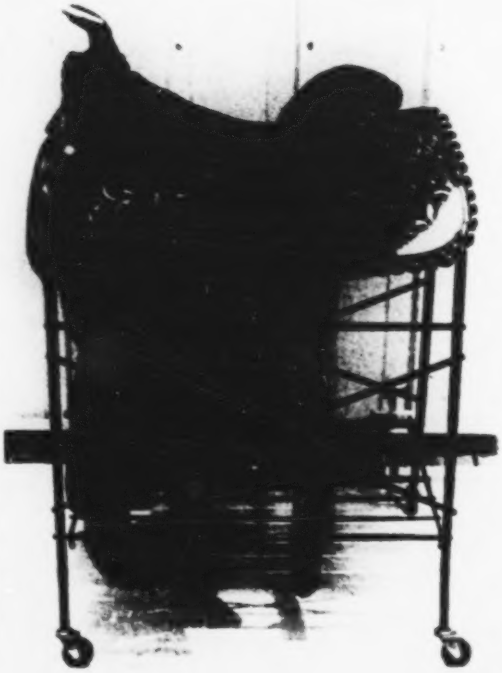
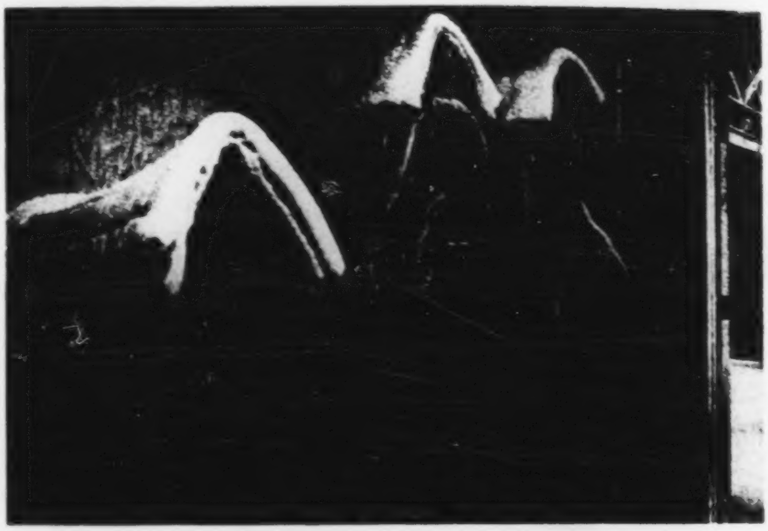


FIGURE 21



ENGLISH SADDLES

- Cover with carrying case and place on a rack. (Figure 22)

FIGURE 22

BRIDLES

- Hang on a rack so that bridle reins will not get twisted. (Figure 23)

FIGURE 23

OBJECTIVE 10 **Complete the Job Sheet.**

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JOB SHEET

SELECTION AND CARE OF TACK AND EQUIPMENT

H1

Name ______________________________

OBJECTIVE 10

Clean tack.

EQUIPMENT AND SUPPLIES

- Saddle soap
- Neatsfoot oil or desired oil
- Sponge
- Soft, dry cloth
- Small buckets for water
- Saddles

PROCEDURE

Functional Reading
- Follow written instructions

Job Acquisition/ Development
- Master specific job task/procedure

	Yes	No
1. Remove all loose particles from the saddle.	____	____
2. Rub dampened sponge on the soap.	____	____
3. Work lather into leather. Apply to a small area at a time.	____	____
4. Wipe with clean sponge, squeezed as dry as possible.	____	____
5. Buff leather with a soft cloth.	____	____
☑ **NOTE:** Leather should be dry before buffing.		
6. Oil underneath portions of leather, especially seat jockey and fenders.	____	____
☑ **NOTE:** Use caution when applying oil, oil on light-colored saddles may cause spotting.		

SKILL TEST RECORD

EVALUATOR'S COMMENTS

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Key below.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:

Leather cleaned	4	3	2	1
Leather polished	4	3	2	1
Leather oiled	4	3	2	1

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the points in Product Evaluation and divide by the total number of criteria. Circle the rating on the Key.

KEY

4 **Skilled** – Can perform job with no additional training.
3 **Moderately Skilled** – Has performed job during training program; limited additional training may be required.
2 **Limited Skill** – Has performed job during training program; additional training is required to develop skill.
1 **Unskilled** – Is familiar with process, but is unable to perform job.

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EVALUATOR'S COMMENTS

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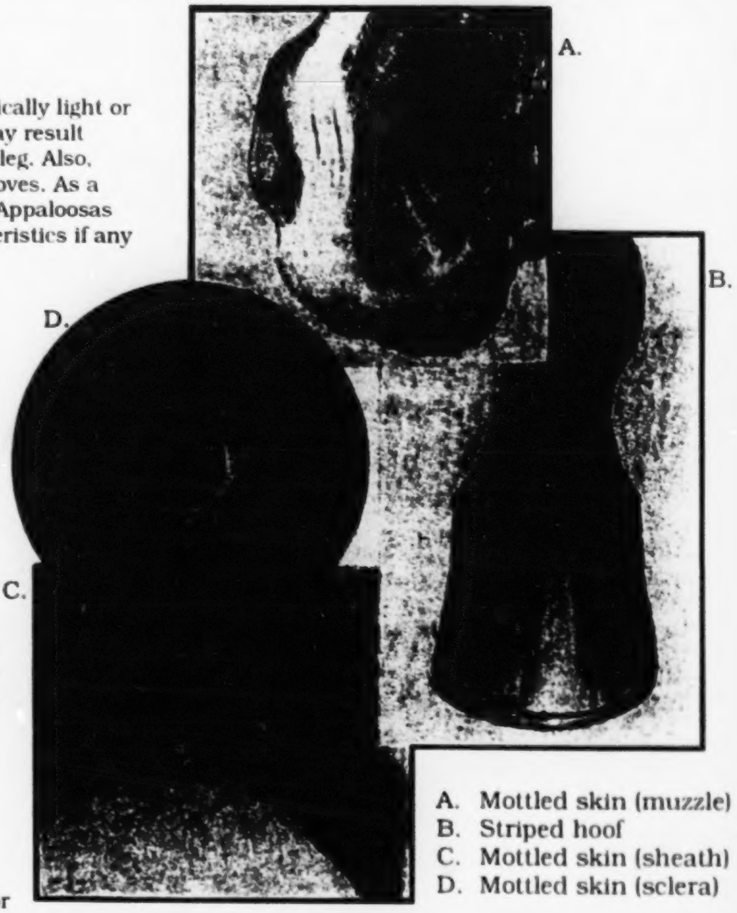
IDENTIFYING THE APPALOOSA

Appaloosa Characteristics

Although Appaloosas are most commonly recognized by their colorful coat patterns, they also have other distinctive characteristics. The four identifiable characteristics are: white sclera, striped hooves, mottled skin and coat pattern. In order to receive regular registration, a horse must have a recognizable coat pattern or mottled skin and one other characteristic. Horses which receive regular registration are issued numbers (no letters precede the number). Those not displaying mottled skin and one other characteristic will be classified as non-characteristic (N/C) and their registration numbers are preceded by the letter "N." Horses which complete the Certified Pedigree Option (CPO) program are issued numbers preceded by the letters "CN."

White Sclera

The sclera is the area of the eye which encircles the cornea — the colored or pigmented portion. The white of the human eye is an example. All horses have sclera but the Appaloosa's is white and usually more readily visible than other breeds. *All* horses can show white around the eye if it is rolled back, up or down or if the eyelid is lifted. Readily visible white sclera is a distinctive Appaloosa characteristic provided it is not in combination with a large white face marking, such as a bald face.



A. Mottled skin (muzzle)
B. Striped hoof
C. Mottled skin (sheath)
D. Mottled skin (sclera)

Striped Hooves

Many Appaloosas will have bold and clearly defined vertically light or dark striped hooves. (See illustration) Vertical stripes may result from an injury to the coronet or a white marking on the leg. Also, light colored horses tend to have thin stripes in their hooves. As a result, all striped hooves do not necessarily distinguish Appaloosas from non-Appaloosas. Look for other Appaloosa characteristics if any of these situations apply to your horse.

Mottled or Parti-colored Skin

This characteristic is unique to the Appaloosa horse. Therefore, mottled skin is a basic and decisive indicator of an Appaloosa. Mottled skin is different from commonly found pink (flesh-colored or non-pigmented) skin in that it normally contains dark areas of pigmented skin within its area. The result is a speckled or blotchy pattern of pigmented and non-pigmented skin. (See illustration)

If a horse has mottled skin, it may be found in several places. In addition to the muzzle and eye areas, mottled skin may be seen spreading from the center of the anus or vulva to the surrounding area. Mottled skin may also be found on the sheath, testicles or udder. Many breeds will have specks of non-pigmented skin in this region which should not be confused with Appaloosa mottled skin.

When identifying mottled skin, remember that mottled skin found on the muzzle and around the eye will often have a different appearance than that which is found in the genital regions. Mottled skin found on the muzzle, for example, will have a speckled pattern of pigmented and non-pigmented skin, whereas mottling on the genitals is more likely to be a blotchy pattern, sometimes looking like an irregular "map" of light and dark skin. Mottled skin around the eyes and/or muzzle can extend over both nostrils and around both lips. All horses have a line between pigmented and non-pigmented skin on their lips when these are separated. Searching for signs of mottled skin should not include separating the horse's lips.

Simple differences in pigmentation of certain areas are common to many breeds and should not be considered appropriate examples of mottled skin. These include patches of light and dark skin on the underside of the tail, penis or the upper inside of legs. Pumpkin skin is a general term referring to lightly pigmented, often orange-tinted skin, without the contrast between dark, and light areas evident in Appaloosa mottled skin.

Used with permission from the Appaloosa Horse Club, Inc., Moscow, ID.

Nutritional Concerns for Exercising Horses

OSU
Extension
Facts
No. 3970

Oklahoma Cooperative Extension Service • Division of Agricultural Sciences and Natural Resources

Dr. David W. Freeman
Oklahoma Extension Equine Specialist

The horse is a unique specie of livestock in that its primary purpose is for pleasure or work. Equine nutritionists have long been concerned with supplying the correct amounts and types of nutrients in order to achieve maximum exercise performance. It is the nutritionists' goal to maximize the nutritional impact on exercise, so owners can prioritize exercise and breeding programs which produce and maintain the desired equine athlete.

Categorizing Different Types of Exercise

Different uses require horses to perform different types of exercise. Exercise types differ in duration and intensities, and these differences affect usage of energy. In general, exercise is classified into two categories: aerobic and anaerobic. Aerobic exercise is typical of low intensity, long duration performance in which the horse's heart rate stays below the range of 150 beats per minute. Walking would be an example of a nearly pure aerobic exercise. On the other end of the exercise spectrum are those types of high intensity, short duration such as sprinting or draft work. These types of exercise are termed anaerobic and are characteristic of heart rates above 150 beats per minute.

Most horse uses are combinations of aerobic and anaerobic exercise or fall between the intensities and durations to be classified as purely one type or the other. Detailed descriptions of exercise programs can be obtained by contacting Oklahoma Cooperative Extension Offices for OSU Facts: *F-3983 Concepts of Equine Exercise Physiology, F-3984 Specific Event Training Programs* and *F-9118 Monitoring Fitness of Horses by Heart Rate.*

While it is evident that different types of exercise impose distinctive demands on the horse's body, exercise in general will increase energy use for muscular activity, increase protein use if actively increasing muscle mass, increase the loss of minerals through sweat, and increase the use of vitamins for catalyzing energetic pathways.

Energy Needs for Exercising Horses

Performance horses have unique nutritional needs imposed on their bodies. Exercise can create a change in requirements for all types of nutrients; however, energy is usually the nutrient of most concern. It has long been understood that as work level increases, so does the need for more feed to supply increase in energy. However, it has been only recently that research efforts have been made to identify how different types of exercise specifically affect the horse's energy requirements.

During aerobic exercise, energy is supplied in part to the muscle by energy pathways that use oxygen to assist in nutrient breakdown. During anaerobic exercise, the intense demands for energy overwhelm the nutrient breakdown pathways which use oxygen; so non-oxygen using pathways must supply energy to the muscle.

Energy Containing Compounds in Feedstuffs. Energy containing compounds that are produced through nutrient breakdown include glucose and fatty acids. Glucose can be broken down aerobically and anaerobically; fatty acids rely on aerobic pathways. Energy is supplied to the body through the breakdown of protein, carbohydrates, fat, and fiber. Carbohydrates are the sugars and starches found in feedstuffs. Grains have relatively large amounts of starches as compared with forages. Carbohydrates are the major contributor for glucose. Fats supply fatty acids. Fats are found mainly in grains and grain byproducts. Protein is not considered a primary energy source in horses consuming adequate energy from other sources; however, net energy deficiencies such as fasting can cause large amounts of protein to be degraded to supply glucose to the body.

Fiber is supplied in large amounts by forages. Fiber is processed by the microbes in the horse's large intestine to produce volatile fatty acids. Volatile fatty acids are absorbed through the large intestine of the body and are used in various energy pathways in the body. Some types of these fatty acids are used exclusively aerobically, while others are processed by the liver to produce glucose which can be used anaerobically. Although fiber is not considered a source to supply large amounts of energy for quick replenishment from exercise depletion, it is an important contributor of energy throughout the day and has added benefits of assisting in proper flow of digesta through the digestive tract.

Use of Energy Containing Compounds. Horses in net negative energy load are not receiving adequate

Oklahoma State University

dietary replacement of energy losses resulting from exercise. In efforts to meet the energy demands, the horse will mobilize body fat to supply energy to the heart, kidney, and muscle. Glucose stored as glycogen in the liver and muscle will be mobilized, and protein will be broken down to supply glucose to the brain and constituents of the blood.

How much the different types of compounds are used for energy depends on the intensity of exercise and amounts supplied in the diet. During highly aerobic exercise such as walking, fat and carbohydrates supply the majority of the needed energy. As intensity of exercise increases, the ability of the body to use fat as energy becomes limited because of the overwhelming of oxygen dependant pathways. During highly anaerobic exercise, carbohydrates, or more accurately glucose, is responsible for supplying energy needs. The intensity of exercise which causes the oxygen using pathways to become overwhelmed varies among horses and with the physical conditioning of a specific horse. As horses become more fit, the time the horse becomes anaerobic is delayed, allowing for more efficient use of energy.

Research has also indicated the dietary supply of different types of energy containing compounds, i.e. carbohydrates and fats, can affect energy usage. Research has shown that rations containing fat at levels up to 15% can be utilized by horses. Typical examples of commercially available grain mixes with added fat contain about 14% total fat. The overall fat content would be lower than 14% when you feed the grain mix with hay or forage.

Fat added rations have benefits in supplying large amounts of energy per pound. The energy concentration in fat is about 2 1/2 times that of carbohydrates. Moreover, some evidence exists that fat added rations will assist in maintaining higher levels of glucose containing compounds for exercising horses because of increased use of fat during the aerobic part of exercise. By using more fat during the aerobic phase of exercise, the amount of available glucose for use during anaerobic exercise would be greater.

Ration Analysis of Energy Containing Feedstuffs. Feedstuffs not only differ in energy concentration (i.e. Megacalories of Digestible Energy per pound-Mcal DE/lb), but also in the concentration of starch, fat, and fiber (Table 1). For example, corn is expected to contain about 1.6 Mcal DE/lb, 70% starch and 3% fiber while oats are expected to contain around 1.3 Mcal DE per pound, 45% starch, and 10% fiber. These relative concentrations are useful when you analyze the total intake of different rations fed at levels to meet the same digestible energy needs.

The oats and hay ration is lower in amount of starch fed per day as compared with the oat-corn ration. More of the energy in this ration would be in the form of fiber which is a slower digested energy substrate as compared with fat and starch. This provides some basis for the subjective evidence that horses on oats and hay do not perform well during heavy conditioning or intense physical exertion. Not only does the ration require the most pounds per day of consumption to meet a specific energy need, but the lower starch level might delay replenishing of glucose containing compounds in the muscle. Combining a mixed feed with hay such as the second ration in Table 1 increases the starch content of the diet by about a pound per day. Adding fat decreases the amount of starch fed per day and increases the amount of fat.

Table 1. Comparison of Energy Content of Three Different Rations

Ration Description*	Pounds per Day	Starch		Fat	
		%	lb/day	%	lb/day
Oats + Hay	31	24	7.2	4.3	1.3
60% Oat-40% Corn + Hay	30	28	8.1	3.9	1.2
58% Oat-40% Corn-4 % added Fat + Hay	28	26	6.5	8.0	2.2

*All rations fed in a 60-40 ratio with grass hay at levels to meet an energy requirement of 35 Mcal of DE per Day.

Both fat and starch can be efficiently used as energy substrate, but the ability of each to replenish different fuels for muscular exercise is specific (i.e., fat cannot produce glucose). The added fat diet has the benefit of supplying larger amounts of a safer energy type in smaller ration amounts, thus aiding as a guard against weight loss from net negative energy load during intense conditioning programs. Whether or not athletic performance is negatively affected by the lower starch content of the added fat ration depends on the type of athletic performance, the intensity of exercise, and probably individual horse differences in utilizing the different substrate. The exact needs for different energy components of rations designed for horses performing different types of exercise are not fully agreed upon by nutritionists.

Feeding Energy. There are several considerations for supplying energy to exercising horses. First, ideal body weight and condition for maximizing performance varies between individuals and conformation types. Most successful trainers condition horses into fitness and body condition through exercise programs while maintaining generous supplies of energy instead of restricting energy intake to keep body weight off. Starch supplies the horse with a source of glucose, the energy source for anaerobic exercise. Large amounts of starch at a single feeding increase the incidence of colic and founder, so three a day feedings are recommended when you feed horses large quantities of grain. Fat supplies large amounts of energy per unit weight and is used as an energy source for aerobic exercise. Fat may have its best benefit by maintaining the horse in energy balance during the long hours of conditioning, thus sparing the amount of glucose containing compounds in the muscle for the day of performance. Mixed grain diets with and without added fat have been used successfully to meet energy demands for exercising horses. Oats used alone with hay may be deficient and adversely affect athletic performance.

Protein Requirements

Long yearlings and two year olds need protein for maintenance and growth of muscle tissue. Exercise may increase the rate of muscle deposition, thus increasing the protein demand in young, exercising horses 1 to 2% above amounts needed for maintenance and normal growth. Proteins are large compounds made of individual amino acids. Several of the amino acids necessary for muscle deposition cannot be synthesized by the horse's body, and they must be supplied by the diet. As such, the balance of these amino acids or protein quality is an important consideration for exercising horse diets. Lysine is the amino acid thought most limiting for growth in horses. Comparisons of protein and lysine requirements for different classes of horses are given in Table 2. As with energy, the protein and lysine content of different feedstuffs vary (Table 3).

Most commercially prepared grain mixes are formulated for exercising horses to contain between 12 and 14% protein with soybean meal supplementing the protein in the grains. Protein deficiency in exercising horse diets should not be a concern if adequate amounts of grain mixes and hays are fed to meet energy needs. Protein quality rather than total protein content should be of more concern when you formulate rations for exercising horses. Low quality hays combined with grain mixes low in lysine can restrict muscle deposition in young horses, thus limiting athletic performance.

Table 2. Protein Requirements for Different Classes of Exercising Horses with Mature Weights of 1200 Pounds

Class of Horse	Protein lb/day	%	Lysine gm/day	%
Mature, Light Work	2.0	9	34	.32
Mature, Heavy Work	3.0	10	54	.36
Long Yearling	3.0	11	60	.45
Two Year Old	3.0	10	55	.41

Table 3. Protein and Lysine Content (% as fed) of Selected Feedstuffs

Feedstuff	Protein	Lysine
Oat	12	.39
Corn	9	.25
Prairie Hay	6	——
Alfalfa Hay	18	.80
Soybean Meal	44	2.87
Cottonseed Meal	41	1.68

Vitamin Requirements

Vitamins are probably the least understood, most supplemented class of nutrients in horse rations. There are two general classes of vitamins, fat soluble and water soluble. The fat soluble vitamins are stored in the horse's body for long periods of time. Vitamins A, D, and E are the fat soluble vitamins of concern in horse rations. While recommendations do not suggest needed increases in dietary concentration of Vitamins A and D above those concentrations necessary for maintenance, the recommendation for Vitamin E concentration is increased slightly (Table 4).

Table 4. Recommended Vitamin Concentrations in Rations for Exercising Horses

Vitamin Concentration	Maintenance	Exercise
Vit A, IU/lb	910	910
Vit D, IU/lb	136	136
Vit E, IU/lb	23	36
Thiamin, mg/lb	1.5	2.5
Riboflavin, mg/lb	1	1

The B vitamins are classified as water soluble. Thiamin and riboflavin are the two B vitamins most recommended to supplement in horse rations. The microbes in the horse's large intestine produce large quantities of B vitamins, and supplementation of most is considered unnecessary. Nonetheless, because of the close relationship of B vitamins with energy supplying pathways in the body, most trainers supplement B vitamins to exercising horses.

Many commercially prepared grain mixes have vitamin premixes added at levels to meet or exceed requirements for all classes of horses. If desired, an orally administered B vitamin supplement may be added to the feed. Most supplements have combinations of vitamins and minerals, so selection and use of only one supplement is desired to decrease the chance of excess feeding. Although practiced commonly, the use of injectable sources of vitamins has not been shown to be warranted.

Mineral Requirements

The need for additional minerals in rations formulated for exercising horses is largely related to the increased mineral loss through sweat. Sweat contains appreciable amounts of sodium, potassium, chloride, calcium, and magnesium. As such, recommendations call for increases in these minerals for horses in environments or exercise conditions which promote sweating (Table 5).

Table 5. Recommended Mineral Concentrations in Ration for Exercising Horses

Mineral	Maintenance	Exercising
Sodium, %	.10	.30
Sulfur, %	.15	.15
Iron, mg/kg	40	40
Calcium, %	.21	.27
Phosphorus, %	.15	.22
Magnesium, %	.08	.11
Potassium, %	.27	.36

In general, many of the mineral needs increase slightly with exercise. The need for additional salt (sodium chloride) is of most concern. Unlike most minerals, horses can self regulate salt needs by access to salt blocks as long as there is free access to water. Trace mineralized salt blocks should supply most if not all the additional mineral needs for exercising horses, although some types of intense, prolonged work such as endurance riding may necessitate oral supplementation with liquid or paste electrolyte mixtures. A sample daily electrolyte mix would contain approximately 4 grams sodium chloride, 2 grams potassium chloride, and 0.2 grams magnesium sulfate.

Special Concerns for Feeding Exercising Horses

How nutrients are supplied to exercising horses can be more of a factor to success than what is being fed. Changes in environment, hauling, and other factors which disrupt the horse's normal schedule can cause the horse's appetite to be depressed. As such, the potential for weight loss and poor performance is increased.

Starch Overload. One area of concern when feeding large amounts of grain daily is the potential for starch overload. Large amounts of starch at one time overwhelm the capacity of the horse's stomach and small intestine. The undigested starch passes into the large intestine where the normal microbial flora digest it. Large amounts of microbial digestion of starch can lead to colic and founder. As a general rule, grain mixes should be limited to levels of 0.5% of body weight at one feeding. Therefore, the high levels of grain inherently fed to exercising horses to meet energy demands should be split into three-a-day feedings.

Timing of Feeding. Another concern among trainers is the timing of feeding in relation to exercise. It is good management to allow the horse to digest its ration at least 2 to 4 hours before beginning any physical exertion. This delay would allow the majority of nutrients to pass from the stomach to the intestines of the horse. It is not recommended to restrict the horse's ration prior to the day of exercise. Restriction of diet for longer than 6 to 12 hours prior to exercise may decrease the availability of energy and hence decrease athletic performance. Trainers should be careful not to make abrupt changes in the composition of the ration by restricting grain or hay or changing feeding times immediately prior to exercise. It is likely that the horse's schedule will become disrupted on the day of performance, and the added change of diet may cause digestive tract disorders.

Body Weight Regulation. Horses like other athletes are individuals and must be managed as such if maximum athletic performance is to be achieved. Horses can be expected to have an "ideal performance weight", and body condition will vary slightly between individuals maintaining their ideal weight. Every trainer has a subjective ability to visually determine body weight, however unnoticeable changes may be large enough to cause differences in performance. For that reason, some race tracks and training facilities provide scales. Comparisons of athletic performance at different body weights, weight changes before and after performance and general trends of weight changes through a conditioning program assist the trainers in regulating the nutritional and conditioning programs for each horse.

Water. Although water was not previously discussed, it is a nutrient of vital concern to horses. Dehydration leads to decreased performance or more serious health problems causing shock and death. The only time it is recommended to restrict water intake is immediately prior to exercise and during immediate recovery from exercise when heart and respiration rates are elevated. At these times small amounts of water given frequently will guard against dehydration without increasing the potential for digestive upset. Insuring adequate water intake rather than water restriction should be more of a concern, especially in hot, humid environments or prolonged bouts of exercise.

Quality of Feedstuffs. Exercising horses must consume large amounts of feed per day to meet nutrient needs. Feedstuffs must be of high quality, clean and fresh. It is not sufficient to feed large amounts of low quality or unbalanced rations in hopes that requirements will be met.

In summary, exercise can have a dramatic effect on the nutrient requirements of horses. Exercising horses can be expected to be highly individual in their needs for different nutrients and their acceptance of different rations. Exercise can place large nutrient demands on the horse, and intense management is necessary to ensure adequate intakes of balanced rations for exercising horses. Decreased athletic performance and feed related health disorders are significant problems that must be guarded against through proper ration selection and feeding management. Nutrition is but one part of athletic performance. It may be the easiest part to control; however, it will not overcome poor genetics or conditioning programs. On the other hand, it can be optimized and should not be limiting to athletic performance.

Nutritional Considerations For Broodmares

OSU Extension Facts

No.3975

Oklahoma Cooperative Extension Service • Division of Agricultural Sciences and Natural Resources

David W. Freeman
Extension Equine Specialist

The successfulness of any breeding program will depend partially on correct nutritional management of broodmares. Past history reveals the common use of many different nutritional management practices for broodmares. Many of these have contributed to increased cycles per conception, low foaling rates, and below average foal growth. Recent studies provide information which enables nutritionists to refine recommendations of nutrient requirements for maximum broodmare performance. The broodmare owner should supply the amount and balance of nutrients that will aid in maximum conception rates and best meet the needs during gestation and lactation. Nutrients of concern include energy, protein, minerals and vitamins.

The Open Mare

The mare owner's objective for this group of mares is high conception rates early in the breeding season with a low ratio of cycles bred per conception. The sooner a mare has conceived, the quicker she can be removed from the breeding program, and the more economical it is to the mare owner. This is especially true when mares are taken to a breeding farm. Mares that are settled on the first cycle will cost the owner less in mare care, and better enable the stallion manager to make efficient use of labor and available stallion semen.

Body condition and Energy Needs. A major problem with open mares is that many enter into the breeding season in poor body condition. Body condition is visually identified by observing fat cover along the neck, withers, back, shoulder, ribs and tailhead. Mares in a low body condition have little to no fat cover along the sides of the neck or withers, behind the shoulder or around the tailhead. Also, the backbone and a faint outline of the ribs can be seen. Recently, controlled studies at several universities indicate conclusively that mares entering into the breeding season in low condition require more cycles per conception, have lower conception rates, and are later in their transition into the ovulatory season as compared with open mares in a fleshy condition. Mares in fleshy condition will have a slight crease down the back and will have fat covering the outlines of the ribs. Noticeable amounts of fat can also be seen along the sides of the neck and withers, and the fat deposited around the tailhead feels soft.

Energy content of the ration is of major concern because of the influence of body condition on reproductive performance. The amount of energy that needs to be fed per day will depend on how much the mare weighs, and whether she needs to gain weight before the breeding season. An 1100 pound mare maintained in a fleshy body condition will generally require a high quality hay at 1% of her body weight plus 6 to 7 pounds of an 8% crude fiber grain mix daily.

Grain needs for mares on pasture will vary widely due to quality and quantity of available forage. It is important to observe grouped mares individually as those in low body condition may need to be removed from the herd and fed supplemental grain. It is important to remember that mares in a marginal or thin condition can quickly lose condition when moved to the new surroundings and activities of a breeding farm. Increasing body condition on these mares proior to moving to the breeding farm will help avoid delays in the onset of estrous and conception.

Protein needs. The open mare's protein requirements is no different than for other mature horses at similar weights. An 1100 pound mare will need about 1.5 pounds of crude protein per day. This relates to feeding 15 pounds of a 10% crude protein ration. One must consider both hay and grain sources of protein when determining fed levels, so it is good practice to have the hay source analyzed for protein. For example, if 11 pounds of bermudagrass hay which analyzed to be 10% crude protein is fed with 6 pounds of a 12% crude protein grain mix, you would be feeding about 1.8 pounds of crude protein. Usually, protein requirements are met when feeding adequate grain to maintain energy levels for a fleshy condition in mature, open mares.

Calcium and Phosphorus Needs. Calcium and phosphorus are the major minerals of concern. Calcium and phosphorus requirements of open mares are dependent on the body weight and digestibility of minerals in the feed. An 1100 pound mare will need about 23 grams of calcium and 14 grams of phosphorus per day. This level relates to feeding a grain-hay ration with .3% calcium and .15 to .2% phosphorus. Calcium levels should be 1.5 to 2 greater than phosphorus levels in the total ration. Hays are usually higher in calcium than phosphorus, but levels of available minerals will vary greatly from different hay crops. Most commercial grain mixes contain equal amounts of calcium and phosphorus to ensure a proper ratio. Grain mixes should contain about .5% calcium and .4% phosphorus when combined with grass hays to ensure adequate amounts of these minerals.

Vitamin Needs. Vitamin requirements are generally met in open mares when feeding high quality grain and hay. Most commercially available grain mixes have added vitamin sources to ensure adequate vitamin levels. Vitamin premixes can be fed to supplement questionable feed sources but should be fed only at recommended levels.

Mares in Last 90 Days of Gestation

The mare in late gestation differs nutritionally from the open mare. Her nutrient requirements are slightly higher because she is maintaining her body and supplying nutrients to a rapidly growing fetus.

Body Condition and Energy Needs. The mare requires an additional 2 to 3 Calories of digestible energy above maintenance requirements. This increased energy need can be met by feeding more of the same concentrate she was consuming when open and during early gestation. An 1100 pound mare will need about 2 to 3 pounds of additional grain mix per day when she enters late gestation to meet her increased energy requirement. It is important that she remain in fleshy condition if she is to be rebred following foaling. The added nutritional stress brought on by early lactation can cause mares in a marginal condition to drop in condition to the point of affecting rebreeding efficiency. Also, most pastures are in their lowest nutritive value this time of year, so close inspection of mare condition is necessary so grain and hay levels can be adjusted accordingly.

Protein Needs. The gestating mare has a slightly increased need for protein above her requirement in the open state. Crude protein requirements will increase about 1/3 of a pound when mares are in late gestation. This increased need above maintenance is usually met when feeding more grain mix to supply adequate energy, so a higher percent protein ration is usually not necessary.

Calcium and Phosphorus Needs. As with other nutrients, the amount of calcium and phosphorus required during late gestation is increased above the amounts needed in the open state. These mares require approximately 10 grams more calcium and phosphorus than when in an open state. As with protein, these amounts are usually more than adequately met when increasing the amount of grain mix for energy purposes.

Vitamin Needs. The major vitamin of concern during late gestation is vitamin A. Vitamin A requirements are doubled when mares are in late gestation and lactation. Most commercially prepared grain mixes have sufficient levels of added vitamin A to adequately meet vitamin A requirements, however, many producers routinely feed a vitamin premix to gestating mares consuming feeds of questionable vitamin levels. It is important that the premix contain at least a 5 to 1 ratio of Vitamin A to Vitamin D, and be fed at levels recommended on the label. Overfeeding of several of the vitamins can cause irreversible damage to the mare and fetus.

The Lactating Mare

The wet mare's nutrient requirements are greatly influenced by the amount of milk produced to supply the nutrient needs of the foal. Milk yields range from 2 to 3% of the mare's body weight per day, so it can be easily seen that nutrient needs are greatly increased.

Body Condition and Energy Needs. Energy requirements will nearly double following foaling. It is not unusual for an 1100 lb. mare to need 12 to 15 pounds of an average energy density grain mix in addition to 10 to 12 lbs. of a good quality hay to meet her energy needs. Careful management is necessary in this class of mares because individual requirements will vary greatly. A foal can quickly lower condition in the mare, and reports have indicated that wet mares in a low condition may take longer to rebreed and have lower pregnancy rates than mares in a fleshy condition. Also, it is not unusual that the mare is moved to a new location for breeding soon after foaling which can create a loss in condition due to stress. It is extremely difficult to increase condition in lactating mares because the amount of feed that would be necessary can lead to higher incidence of founder and colic. As such, it is important that the mare is adequately conditioned before foaling.

Protein Needs. Protein requirements are also of importance during lactation because of the large amounts of protein leaving the mare in the milk. Mares not receiving adequate protein have been shown to have decreased milk production resulting in lowered foal growth. Requirements double in heavily lactating mares, and a increased percent protein ration is usually necessary. Most hay-grain combinations dictate that the grain mix be at least 14% crude protein. Grain mixes with 10 to 12% crude protein should be fed with a hay high in crude protein, so many producers feed a high quality alfalfa with this type of grain mix.

Calcium and Phosphorus Needs. Calcium and phosphorus needs will also double in the lactating mare as compared with her requirements for maintenance. The calcium and phosphorus density of the grain ration will depend on the amount of grain and hay that is fed. The mineral density of most rations should be increased to levels of 0.5% calcium and 0.3% phosphorus to meet the added requirement. Mineral needs can be met when increasing the amount of grain mix fed for energy needs. If grain and hay sources are marginal in their mineral densities, it is advisable to add a mineral premix to rations for this class of mares. Mineral premixes, like vitamin premixes, should be added only at recommended levels.

Vitamin Needs. Most classes of horses will meet their vitamin needs by feeding high quality grains and hays. Vitamin requirements increase in lactation to the point that it is a good practice to add a vitamin source to grain mixes. Even though many commercial mixes have added vitamins at levels to meet vitamin needs during lactation, many producers feed a vitamin supplement to lactating mares to insure vitamin needs are being met. As with other classes of horses, vitamin premixes should contain at least a 5 to 1 ratio of vitamin A to D, and be fed at levels recommended from label directions to insure proper levels of these two vitamins.

Equine Purchase Examinations

OSU
Extension
Facts
No. 9114

Oklahoma Cooperative Extension Service • Division of Agricultural Sciences and Natural Resources

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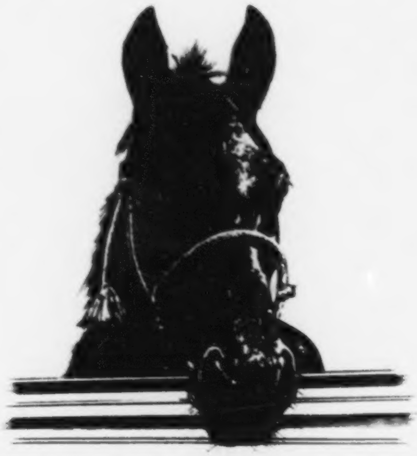


Unlike other consumer products that one might purchase, horses rarely come with a guarantee. Therefore, the buyer must make the best possible attempt to select an animal that is suitable and capable of performing a given function. The final determination, of course, is the price. The combination of function capability, suitability, and price enter into the ultimate decision of whether or not a prospective buyer should purchase a given animal.

The purchase examination or prepurchase examination, done by a qualified veterinarian, is perhaps one of the best ways to help the prospective buyer determine serviceability. It is the veterinarian's responsibility to look for physical and medical evidence to determine whether or not the horse will withstand a particular use for the prospective buyer. The term "purchase examination" implies a complete clinical examination that includes consideration of the pertinent medical history and environmental factors. All other terms that have been associated with this type of examination should be abandoned, for they are either incomplete or cause confusion about the type of examination that has been done.

The role of the veterinarian is to find medical problems on the date of the exam, evaluating conformation defects in light of future problems that they may cause, as well as evaluating overall health. Even though the procedure is applicable to all classes of horses, the veterinarian involved should have a thorough knowledge of the class and use of the horse to be examined.

Serviceability is not synonymous with soundness. Perfectly sound animals—those with no physical faults—are rarely found. A horse may have minor alterations from "perfection" and still be able to perform the given task. Whether these alterations are too numerous or severe to limit usefulness is the question to be answered. It is the veterinarian's responsibility to note the existing problems and assist the buyer in determining which ones can be overlooked and which will limit present use or have potential to cause future problems. The future can often be accurately predicted, but not guaranteed.

It is inadvisable to examine and determine the potential of an animal that is not on a regulated work schedule. The immature animal which is not in training must be given extended paddock exercise in order to completely evaluate the musculo-skeletal and cardiopulmonary systems. It is not the domain of the examining veterinarian to determine the presence of undesirable traits or vices. The disclosure of this information is dependent upon the integrity of the seller.

An oral or written report is permissible, depending on the desires of both the veterinarian and the prospective buyer. However, it is imperative that the animal examined is completely identified. In addition, a record of all clinical findings, including radiographs (X-rays) if taken, must be maintained in the permanent office files of the examining veterinarian.

It is important that each veterinarian develop a standardized basic procedure in the examination of the horse for purchase. More detailed diagnostic techniques are performed in the event of suspicious disease problems or on client request. In these cases, consultation with a specialist may be required.

Before the examination is begun, any history of preventive medicine programs and previous medical problems is obtained. The horse's markings and other means of identification are noted. Ideally, the horse has been worked by the prospective buyer before the examination so it is known that horse and rider are suited for each other. Findings should be recorded in the order noted so that the entire examination is not trusted to memory.

The horse is viewed in its stall for evidence of abnormal stance or posture and temperament. The horse's eyes are then examined with a direct ophthalmoscope. An indirect, aspheric viewing lens with a halogen-illuminated light source is excellent for a panoramic view of the ocular fundus (rear portion of the eye). Ophthalmic abnormalities are interpreted in terms of the horse's intended use.

The transilluminator of the ophthalmoscope is used to examine the nasolacrimal puncta and external ear canals. The mouth is rinsed and examined, manually and with the transilluminator, for dental disease, malocclusion, or other abnormalities of the oral cavity.

With the horse still in the stall, the rectal temperature is measured and the respiratory rate and pattern noted. The heart is auscultated (monitored using a stethoscope) from both sides while palpating (feeling) the transverse facial or facial artery for irregularities of rate or rhythm. Occluding (blocking) the horse's nostrils for at least 30 seconds often accentuates respiratory problems as indicated by subsequent coughing or dyspnea (difficult breathing). This also causes the horse to breathe deeply for thorough auscultation of the lungs. The trachea and larynx are auscultated carefully and the nasal sinuses percussed (tapping the area as an aid in diagnosing the condition of the underlying parts by the sound obtained).

The horse is then taken to a well-lit, level, firm surface and made to stand with its weight equally distributed on all four legs. The horse's conformation, balance, and symmetry, from all views, are carefully evaluated, with faults predisposing to lameness or gait abnormalities noted.

Next, the head is observed for symmetry, carriage, and coordination of movement, and any cranial nerve defects noted. The mandibular lymph nodes, parotid glands, and guttural pouch areas are palpated. The larynx is palpated for atrophy of the cricoarytenoideus dorsalis muscle or signs of previous surgery. The laryngeal cartilages often can be compressed, causing inspiratory noise in horses with laryngeal hemiplegia (roaring). The ventral neck muscles are palpated and the patency (the condition of being wide open) of both jugular veins determined. The cervical vertebrae are palpated, beginning at the poll. Symmetry of the wings of the atlas (first cervical vertebra) and the horse's response to cervical vertebral palpation and manipulation are noted.

Examination of the body begins on the left side with palpation of the spine of the scapula (shoulder blade), point of the shoulder, and muscles of the shoulder and chest. Working posteriorly on the topline, the withers, dorsal spinous processes of the vertebra, tuber sacrale, and point of the hip are palpated. The muscles of the back, loin, and croup are palpated and evidence of muscle guarding noted. The girth region and ventral abdomen are examined for midline dermatitis, absence of the umbilicus (navel), or signs of previous abdominal surgery. Several breeds of horses will not allow the exhibition of horses with altered tail function. An electromyogram may be necessary to prove normal tail function. Normal tail tone and function should be determined by manipulation and careful observation when the horse is worked. Evidence of coccygeal muscle atrophy (wasting away) and surgical or medical alteration of normal tail function should be noted; the gluteal and caudal thigh muscles are palpated and compared for symmetry. Unilateral muscle atrophy may indicate chronic rear-leg lameness. The external genitalia (reproductive organs) are also examined at this time. Examination of the body is then repeated on the right side.

Next, each limb is inspected, beginning with palpation of the structures of the left forelimb. The digital pulse (pulse at the posterior fetlock) is taken before the sulci and the frog are cleaned and the sole pared, if necessary. The comparative size, balance, wear, and quality of each hoof are noted. A flat sole, atrophied frog, divergent growth rings, sheared heels, improper hoof-pastern angle, and dished cranial (dorsal) hoof wall may indicate previous or existing foot disease. The type of shoe, presence of pads, and shoe wear may also provide useful information. The pliability of the collateral cartilages of the coffin bone and presence of coffin joint effusion (excess fluid) are determined. The posterior pastern region is examined for neurectomy scars, painful neuromas, digital sheath effusion, thickening of the distal sesamoidean ligaments, and ringbone. Firm pressure applied to either side of the extensor tendon on the face of the fetlock may reveal villonodular lesions (proliferative nodules), extensor process fractures, or osselets (bony protrusions). Fetlock joint effusion, "windpuffs," and annular ligament constriction are conditions commonly encountered.

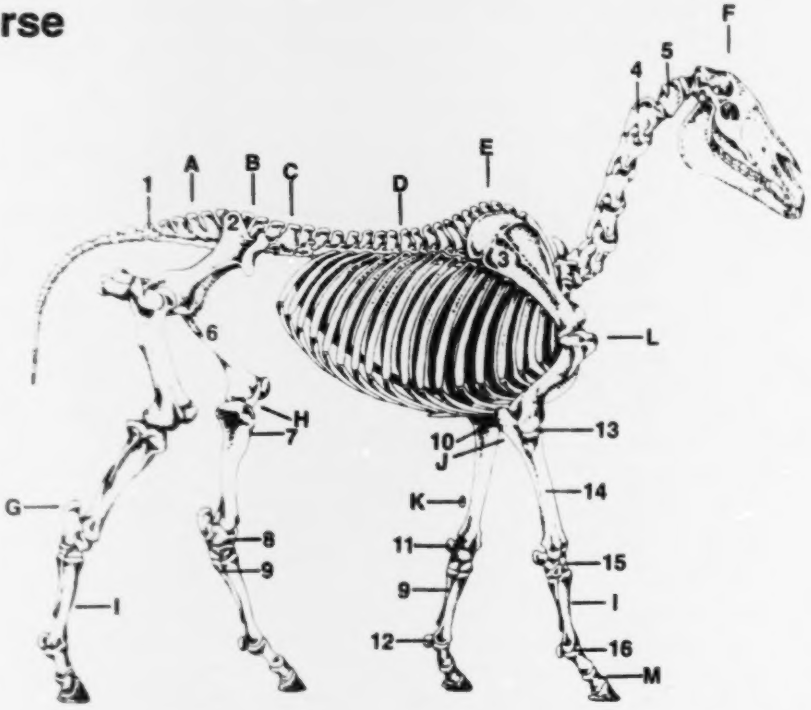
With the leg flexed at the carpus (knee), each sesamoid bone and its branch of the suspensory ligament is palpated for thickening, enlargement, or pain. Moving anteriorly (to the front), the suspensory ligament is palpated to its origin and the flexor tendons palpated for thickening, pain, and loss of separation along their lengths. While palpating the suspensory ligament, abnormal enlargements of the splint bones (short bone along each side of the cannon bone) are often encountered. With the limb still flexed, each splint bone should be palpated from its distal end (farthest point from attachment) to its proximal attachment. Pain on palpation of splint bone enlargements and degree of impingement on the suspensory ligament should be carefully considered.

With the leg flexed, the carpal bones are palpated for thickening, or rents (tears) of the fibrous joint capsule and synovial effusion. The accessory carpal bone and carpal canal are also palpated. Proceeding from the carpus, the muscles of the forearm, distal radius, chestnut, and olecranon are inspected.

After palpation of the forelimb, the range of motion and response to forced flexion or rotation of the digit, pastern, fetlock, and carpus are determined. The shoulder and elbow usually are not manipulated. Decreased range of motion and abnormal response to manipulation are noted and reevaluated when the horse is examined in motion.

Examination of the hindlimb below the hock is similar to that of the forelimb. At the hock, effusion of the tarsal sheath, tibiotarsal joint, and tendon sheaths over the face of the hock are evaluated. The bony structures of the hock, point of the hock, and plantar ligament are palpated. The surgical sites for cunean tenotomy and

The Horse



External Features: (marked with letters)

A. Croup
B. Point of hip
C. Loin
D. Back
E. Withers
F. Poll
G. Hock
H. Stifle
I. Cannon
J. Elbow
K. Chestnut
L. Point of shoulder
M. Pastern

Skeletal Structure: (marked with numbers)

1. Coccygeal vertebrae
2. Tuber sacrale
3. Scapula
4. Axis (second cervical vertebra)
5. Atlas (first cervical vertebra)
6. Femur
7. Tibial crest
8. Tarsus (or tarsal bone)
9. Small metacarpal bone (splint bone)
10. Olecranon
11. Accessory carpal bone
12. Proximal sesamoid bone
13. Elbow joint
14. Radius
15. Carpus or carpal joint
16. Fetlock joint

lateral digital extensor tenotomy are examined. Proceeding to the stifle joint, the tibial crest, patellar ligaments, patella, and lateral trochlea of the femur are palpated. Horses with chronic upward fixation of the patella often resent palpation of the lateral trochlea of the femur and attempts to fix the patella. By this time, the horse's temperament should be known. Most horses permit the examiner to stand behind them and palpate both stifle joints simultaneously, allowing comparison of synovial effusion and joint capsule thickening. The medial collateral ligament of the stifle should also be palpated. After the structures of the hindlimb are examined, the digit, pastern, fetlock, hock, and stifle are manipulated for range of motion and pain.

When the body and legs have been examined, hoof testers can be applied to the feet. Occasionally, a seller may implicate the hoof testers as causing lameness. For this reason, examination with hoof testers is done after the horse has been observed at work.

The next phase of the examination is to observe the horse in motion. Initially, the horse should be observed at a walk toward and away from the examiner. The length of stride, arc of the foot in flight, and how the foot lands should be related to conformation and suspected problems. The horse should be backed and turned in tight circles to detect subtle neurologic deficits.

On a longe line, the horse is worked in both directions at a trot. Work is started in large circles that are gradually tightened. This provides the examiner a good opportunity to evaluate length of stride, fetlock over extension, toe stabbing or dragging, and other gait abnormalities.

Timed flexion or other manipulative tests are performed after work on the longe line, with emphasis on areas with suspected problems. The response to forced flexion, rotation, or digital pressure varies greatly between individuals and must be considered carefully, along with the history and clinical findings. The horse is then watched at work under saddle. After a warm-up period, the horse is observed at a walk, trot, and canter. Trotting in a tight figure-8 pattern frequently reveals subtle lameness. Lead changes and length of stride can be evaluated at a canter.

Though it is the trainer's job to determine whether the horse's disposition and athletic ability are suited to the rider and intended use, it is very informative to watch the horse perform as intended. Tail-wringing, ear-pinning, unwillingness to work in one direction, cross-cantering, failure to pick up leads or other inappropriate behavior often indicate problems. After the horse is worked hard, the larynx and heart are auscultated. Heart and respiratory rates are determined during recovery from exercise.

Once the physical examination is completed, other diagnostic procedures may be done. Radiography is probably the most common ancillary (secondary or follow-up) procedure performed. Radiographs are not routinely obtained in the absence of clinical findings, unless requested by the buyer. Other special diagnostic procedures performed include endoscopic examination of the upper respiratory system, fecal exam for internal parasite ova, rectal examination, uterine biopsy, and breeding soundness examination. Blood is drawn for a Coggins' test for Equine Infectious Anemia, if not current. Blood chemistry analyses, a CBC, urinalysis, drug tests, and an electrocardiogram are other tests that are mentioned for the sake of completeness. However, certain situations may warrant the use of these tests.

Prospective buyers should also be made aware of the potential of Hyperkalemic Periodic Paralysis (HPP). HPP is an inherited defect seen in descendants of a particular Quarterhorse sire characterized by intermittent episodes of muscular fasiculations, weakness, mytonia, and/or involuntary recumbency. During these episodes the serum potassium is often elevated, but between occurrences the potassium concentration is normal. For affected horses, this disease is a lifelong problem. This disease is an autosomal (chromosome-related) dominant trait. Owners and breeders with affected horses should inform prospective buyers of the potential for this disease to occur. There are four methods for confirming HPP—hyperkalemia during an episode, a potassium chloride challenge, electromyography, and testing for a horse-specific sodium channel genetic marker.

After the entire examination is complete, the veterinarian may offer a prognosis (prediction) to the buyer. In considering the prognosis for a performance horse, one must consider the horse's conformation, temperament, intended use, past history, clinical problems, and results of ancillary diagnostic procedures.

The purpose of the purchase examination is not to pass or fail the horse, but to inform the buyer of existing or potential problems that could render the horse unsuitable for its intended use. Certain warranties or agreements between the buyer and seller, such as the length of serviceability, performance ability, and avoidance of drugs before the examination, are not the responsibility of the veterinarian.

The relatively small investment at the time of purchase for a good quality examination can help prevent a much larger investment in treatment or loss of performance later on. Such an exam is certainly a good choice for an informed purchase.

Laminitis in Horses

OSU
Extension
Facts

Oklahoma Cooperative Extension Service • Division of Agricultural Sciences and Natural Resources

No. 9115

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Laminitis is a painful and often crippling disease that may affect horses under a wide variety of circumstances. The term laminitis implies inflammation of the pedal laminae—fine, interlocking connections that hold the hoof wall to the coffin bone—with resulting lameness (Figure 1). This condition may affect several different hoofed mammals, although this article is concerned only with horses.

Laminitis occurs in all breeds of horses, although Thoroughbreds and Arabians appear to be less at risk than others. There are four times as many cases in ponies, but horses are generally more severely affected due to their higher ratio of body mass to weight-bearing surface. While stallions are twice as likely as geldings to develop laminitis, males and females are at equal risk, although the incidence peaks at different ages: 4-7 years of age for females and 7-10 years of age for males. Non-adults are less commonly affected.

Horses on pasture are more at risk during the spring and fall due to the lush growth of forage at these times. The stress of transport and high carbohydrate diets are probably responsible for an increased incidence of laminitis in Quarter Horses during the show and race season.

The exact mechanism by which these diverse circumstances produce the same disease is still something of a mystery. It is assumed that all causes of laminitis produce the disease through a common trigger mechanism.

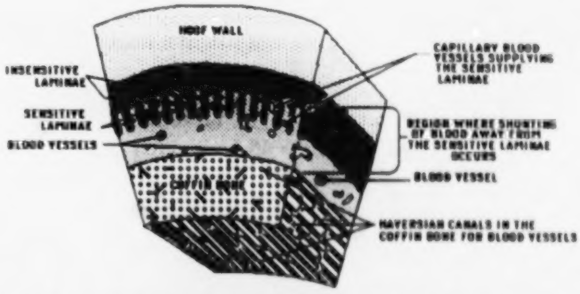
HOOF WALL
INSENSITIVE LAMINAE
SENSITIVE LAMINAE
BLOOD VESSELS
COFFIN BONE
CAPILLARY BLOOD VESSELS SUPPLYING THE SENSITIVE LAMINAE
REGION WHERE SHUNTING OF BLOOD AWAY FROM THE SENSITIVE LAMINAE OCCURS
BLOOD VESSEL
HAVERSIAN CANALS IN THE COFFIN BONE FOR BLOOD VESSELS

Figure 1. The relationship between the hoof wall, sensitive and insensitive laminae and the coffin bone. Note the location of the blood supply to the sensitive laminae.

Researchers have summarized the known facts about laminitis as follows:

1. The long-term crippling effects of laminitis associated with differential growth rates of quarter and toe areas, along with characteristic annular ring growth, have all been associated with coffin bone rotation.
2. Rations high in carbohydrates (including lush growing grasses), intake of excessive amounts of cold water, retained placenta, and over-exercise on hard surfaces have all been associated with acute onset of laminitis.
3. Increases in arterial blood pressure have been associated with severe laminitis.
4. Degree of coffin bone rotation has been associated with the severity of lameness and irreverrsible changes.
5. Digital ischemia (lack of proper blood supply to the foot) has been associated with acute onset of laminitis.
6. Output of blood from the heart (cardiac output) and increases in blood flow to particular body regions (regional blood flow) have been associated with simultaneous digital ischemia.
7. Decreases in serum (clear liquid portion of blood) electrolytes such as potassium and chloride, along with increases in concentrations of red blood cells and total protein, result in decreases in plasma (total liquid portion of blood) prior to the onset of lameness, have been described in horses but not in ponies.
8. Metabolic acidosis (decreased pH in body systems), related to increases in serum lactate prior to onset of lameness has been described.

In recent years it has become clear that laminitis does not originate in the foot but instead the crippling effects are the residual effect of illness involving almost all body systems. Carbohydrate overload is classically used to describe the cause of laminitis because it is the most studied and best understood. The following hypothesis describes the chain of events thought to be involved:

Intake of a high carbohydrate source markedly alters intestinal bacterial balance. Lactic acid-producing bacteria flourish at the expense of other bacterial populations. The increase in acidity within the intestine breaks down the cell walls of resident gram-negative bacteria (a type of bacteria classified by a special laboratory staining technique) releasing their endotoxin (toxic) components. Dysfunction of the intestinal mucosa (lining of the intestine) induced by the highly acid conditions allows absorption of endotoxin and lactic acid. Endotoxin has a primary effect of blood vessels in several tissues, resulting in shunting (passage) of blood between small arteries and veins. Reduced blood supply in the liver and subsequent degeneration of liver cells prohibit adequate removal of the endotoxin and lactic acid allowing systemic (involving all body systems) endotoxemia and acidosis to occur. Selective shunting of the blood away from the sensitive laminae in the feet, even though there is an increased total blood flow to the foot, results in degeneration of the laminae and clinical laminitis.

It is now accepted that laminar ischemia, or decreased blood supply to the sensitive laminae, is the basic lesion of laminitis and the cause of the characteristic pain. The term "laminitis" is not totally correct, as the inflammation is only a secondary result of the decreased blood supply and death of the laminar tissue. While there is increased total blood flow to the foot, producing heat in the hoof wall and bounding pulse in the arteries serving the feet, there is decreased blood supply in the capillaries (small vessels) serving the laminar tissue.

Regardless of the cause of the ischemia (decreased blood supply), once it occurs several other factors come into play which serve to maintain and intensify it. Of primary importance is the response of the nervous system to pain. The blood vessels of the hoof are under control of the sympathetic nervous system and constrict when the nerves are stimulated. This increased level of stimulation also results in release of catecholamines and corticosteroids by the adrenal gland. Both substances cause or compound the problem by increased blood vessel constriction. Thus a complex and vicious cycle develops: decreased blood supply causes pain which brings on a response that adds to the decreased blood supply problem and thereby more pain.

The decreased blood supply and subsequent ischemic necrosis (tissue death) weakens the bond between the coffin bone and the hoof wall (Figure 1). If the condition is severe, subsequent separation of the sensitive and insensitive laminae (with and without nerve and blood supply respectively), may occur. The pull of the deep digital flexor tendon, the weight of the horse, and the leverage that occurs during locomotion all combine to tear the coffin bone from its normal position (Figure 2). This separation allows downward rotation, or in some cases sinking, of the coffin bone or os pedis inside the hoof wall resulting in chronic laminitis (Figure 3).

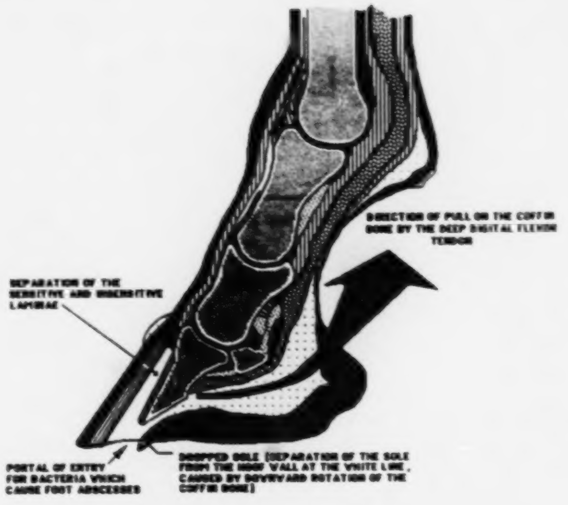
DIRECTION OF PULL ON THE COFFIN BONE BY THE DEEP DIGITAL FLEXOR TENDON
SEPARATION OF THE SENSITIVE AND INSENSITIVE LAMINAE
PORTAL OF ENTRY FOR BACTERIA WHICH CAUSE FOOT ABSCESSES
DROPPED SOLE (SEPARATION OF THE SOLE FROM THE HOOF WALL AT THE WHITE LINE, CAUSED BY DOWNWARD ROTATION OF THE COFFIN BONE)

Figure 2. Severe laminitis with rotation of the coffin bone.

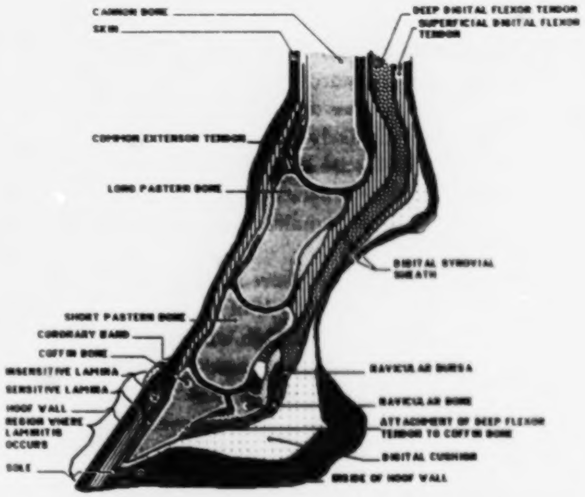
CANNON BONE
SKIN
DEEP DIGITAL FLEXOR TENDON
SUPERFICIAL DIGITAL FLEXOR TENDON
COMMON EXTENSOR TENDON
LONG PASTERN BONE
DIGITAL SYNOVIAL SHEATH
SHORT PASTERN BONE
CORONARY BAND
COFFIN BONE
INSENSITIVE LAMINA
SENSITIVE LAMINA
HOOF WALL
REGION WHERE LAMINITIS OCCURS
SOLE
NAVICULAR BURSA
NAVICULAR BONE
ATTACHMENT OF DEEP FLEXOR TENDON TO COFFIN BONE
DIGITAL CUSHION
INSIDE OF HOOF WALL

Figure 3. Severe laminitis with rotation of the coffin bone. Note the mechanism of rotation by the pull of the tendon of the deep digital flexor muscle.

The acute phase of laminitis begins with the onset of lameness and ends with the downward rotation of the front portion of the coffin bone, or a sinking of the coffin bone, inside the hoof wall (Figure 3). If no rotation or sinking occurs, the acute phase ends 48 hours after the last episode of lameness. One must realize, however, that there is a developmental phase that occurs, as described in the hypothesis, prior to the onset of lameness.

The clinical signs seen during the developmental phase are related to the specific cause of the impending laminitis. For example, in a grain overload situation, one would expect to see increased pulse and respiration, injected (reddened) mucous membranes, and diarrhea. In the case of

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endometritis due to retained placenta, high fever, increased pulse and respiration, and foul-smelling uterine discharge would be anticipated, along with a lack of appetite and depression. In many cases, the clinician is not called until lameness is evident.

In acute laminitis, the feet are warm and painful and the horse is reluctant to move. Any or all of the four feet may be affected, although usually only the front feet are involved. The digital pulse (pulse in the arteries serving the feet) is increased ("bounding"), the coronary band and hoof wall are warm to hot, and sometimes serum will exude from the coronary band. The horse shows signs of severe pain: increased temperature, pulse, and respiration; general anxiety; and often muscular trembling. A hoof tester reveals uniform tenderness over the entire sole.

The stance of the horse with laminitis is characteristic. The horse tries to shift his weight off the affected feet. Thus, if only the forelegs are affected, he stands with his hindlimbs well underneath him and the forelegs extended forward so that he is bearing weight on his heels. If only the hindlimbs are involved, the forelegs are carried back up underneath the body to relieve the hindlimbs. When all four feet are involved, the limbs are collected close together beneath the horse. Horses with laminitis in all four feet or those severely affected, spend long periods of time lying down.

In a classic description of acute laminitis, Obel described irreversible changes and clinically characterized lameness severity according to the following criteria:

> **Grade I:** In the standing position, the horse lifts the feet incessantly, often at intervals of a few seconds ("padding"). At a walking pace, it does not show any lameness, but the trotting gait is short and stilted. When the horse is recovering, this stage is characterized by the latter sign alone.
>
> **Grade II:** The horse moves quite willingly at a walking pace, but the gait is stilted. A forefoot may be lifted without difficulty.
>
> **Grade III:** The horse moves most reluctantly and vigorously resists any attempt to have a forefoot lifted.
>
> **Grade IV:** At this stage the horse does not move without being forced.

In the chronic phase, with the exception of chronic hypertension (persistently high arterial blood pressure), the signs of chronic laminitis are all referable to the foot. The chronic phase begins when rotation or dropping of the coffin bone is first visible radiographically. This can occur as early as three hours after the onset of lameness. Rotation of the coffin bone is evidenced by radiographs or possibly perforation of the sole by the leading edge of the coffin bone. If the forces pulling on the coffin bone and the tissue death (necrosis) are severe enough, the coffin bone may perforate the sole resulting in a septic (infected) condition of the foot. Ischemia (decreased blood supply) of the coronary band, located at the top of hoof wall, may be severe enough to cause loss of the entire hoof wall, less severe rotation results in a "dropped sole"—the sole becomes flat due to the coffin bone pushing down on it from above (Figure 2). Recurrent lameness and an abnormal hoof wall growth pattern are characteristic of the foundered horse—a term used to denote the chronic condition.

Since the laminae of the toe and the front of the coronary band are usually the most affected, the toe initially grows more slowly than the unaffected heel, and the characteristic divergent growth lines of the laminitic hoof wall are produced. Inflammation of the foot secondary to the tissue death probably contributes to the generalized abnormal and rapid growth seen in chronically affected horses. The growth rings are divergent on the hoof wall; narrow at the toe and wide at the heel. When healing occurs, the blood circulation is reestablished, but hoof growth at the toe remains abnormal. Increased scar tissue growth in between the injured laminae, (laminitic wedge), produces a widening of the junction of the sensitive and insensitive laminae (white line) at the toe (which may cause seedy toe) and the resultant predisposition to infection of the deeper laminae ("gravel"). This portal for infection may lead to draining tracts at the coronary band. The wall and sole are of poor quality and flake excessively. The chronically laminitic horse may have an exaggerated gait, flinging the feet forward so that they land on the less painful heel.

It is thought that permanent alterations occur in some body systems, particularly the hormone producing organs (reinangiotensin catecholamines, cortisol, and thyroid hormones) predisposing these animals to recurrent acute attacks. If the circulation to the foot is compromised to begin with, it may not take as much ischemia to produce another episode.

Principles of prevention and treatment have been developed through the combination of research efforts and critical clinical observations. A diet with a high ratio of hay to grain is recommended for all horses. If high quality hay is utilized, the desired nutritional requirements can be met. Owners should be instructed that properly balanced rations can be predominantly made up of hay. This is an economical and logical way to lower the laminitis risk to horses. Sudden changes in environmental temperature coupled with a long trailer ride and diet with high ratio of grain to hay, sudden changes in amount of exercise, sudden dietary adjustments, prolonged retention of the placenta following foal birth, unrestricted cold water intake after vigorous exercise, unrestricted grazing of lush grasses, unrestricted administration of corticosteroids for any reason, and other stressful situations should be avoided.

Since the discovery of the role of endotoxins in laminitis and their affects on other body systems, researchers have been trying to find a vaccine that will protect most horses from most of the endotoxin challenges that they are likely to encounter. Researchers at the University of Missouri have developed such a product. The vaccine is reported to stimulate the horse's immune system to develop antibodies against the cell wall of gram-negative bacteria which is where the endotoxin comes from when the bacteria die.

Besides vaccination of the general horse population, it would appear that serum from horses that have developed high antibody levels, via superimmunization of blood donor horses with the vaccine, may provide an effective means of fighting the clinical abnormalities that may occur following colic surgery, foal septisemia, and endotoxemia. Research remains to be done to prove the wide-range efficacy of such products.

In general, several treatment recommendations have been made. Acute laminitis always should be considered an emergency. Mineral oil can be used to remove or block the uptake of undesirable intestinal contents. Blood flow to the foot should be restored by blocking, with local anesthetic, the nerves that serve the foot, and administration of a non-steroidal anti-inflammatory drug. A sand stall will provide frog and sole support. High blood pressure in the foot, as determined by an increased digital artery pulse, can be lowered by giving low doses of the tranquilizer Acepromazine. Raising the heel to reduce the pull of the deep digital flexor muscle on the coffin bone may help reduce pain and lessen rotation of the coffin bone in severe cases. Salt should be removed to achieve sodium deprivation and one ounce of potassium chloride per day added to drinking water. All medical treatment should be under the supervision of a veterinarian.

Weight distribution to the heel and frog can be achieved by proper trimming, shoeing, or padding. Frequent trimming to prevent development of a misshaped hoof due to the retarded growth in the front part of the hoof is essential. Grain should be eliminated from the diet and a high quality, grass hay provided free choice. The roughage diet provides no substrate for lactic acid producing bacteria. Methionine, an amino acid, is considered vital for hoof growth by some, unimportant by others. Disulfide bonds are important in maintaining hoof horn quality. Oral administration of Methionine does provide disulfide bonds for the new horn being layed down in chronic laminitis.

Corticosteroids are contra-indicated in the treatment of either acute or chronic laminitis. Corticosteroid administration for treatment of conditions other than laminitis have resulted in laminitis and sustained administration of corticosteroids for laminitis delays recovery.

Much has been learned about the cause and effects of laminitis in recent years, but more remains to be discovered. Only a complete and accurate account of the pathogenesis of equine laminitis will lead to better prevention and treatment procedures with which veterinarians may reduce its incidence and severity.

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